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Relations between residential group climate and juvenile antisocial behavior

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Faculteit der Maatschappij en Gedragswetenschappen

CONTENTS

CHAPTER 1

General Introduction

Over the years residential youth care has attracted an increasing amount of attention in the Netherlands. Since 2015, the Dutch government has delegated the responsibility for providing residential youth care to the local authorities if placement is voluntary or mandated by civil law. The general aim of this decentralization is to help as many youth and their families as possible in ambulatory treatment or in foster care, while residential care is more and more considered to be a last resort. Youth admitted to (secure) residential care are very troubled (Barnert, Perry, & Morris, 2016; Fazel, Doll, & Langstrom, 2008). Leloux-Opmeer, Kuiper, Swaab and Scholte (2016) characterized residentially placed children as older school-aged male children with lower than average IQs, who suffer from chronic health problems and frequently display severe emotional and behavioral problems. They often come from broken homes, poor families and have histories of child abuse, neglect, or sexual abuse.

Youth with severe emotional and behavioral problems can be placed by a judge in a (semi-) secure residential youth care facility because of (suspicion of) delinquent behavior, but also to receive treatment and care (Bruning, Liefaard, & Volf, 2004; Harder, 2011; Harder, Knorth, & Kalverboer, 2013). These facilities offer primarily mandatory treatment, starting with a (relatively short) period of residential care, where youth gradually work towards returning to society in more open or community settings (Ten Brummelaar, Boendermaker, Harder, & Knorth, 2011). Treatment is characterized by gradual steps from more to less restrictive care, focusing on behavioral change, training and preparation for the future, and the transfer to a new living situation and aftercare (Van der Poel, Rutten, & Sondeijker, 2008). In open facilities youth are also placed on a voluntary basis. A residential facility is characterized by its group-based treatment, where staff supervise and take care of youth in shifts. Youth's freedom is limited; in open facilities they can leave to go to school or visit family, but in (semi-)secure facilities they live inside the facility, receiving visitors on specific times and under supervision, attending school inside. If they want to go on leave, (judicial) consent has to be given.

Recently, worries have risen about the efficacy of residential care (NJI, 2019) due to an increasing number of suicides in residential youth care and placement instability, violating the first necessary condition for education and treatment, that is, stability and continuity of care (Bronfenbrenner, 1979; Jones, 2008; Schulze, 2000). Also, in the summer of 2019 a research report on violence in youth care in the Netherlands from 1945 until 2018 was published, which had been commissioned by the Dutch government (Committee Violence in Youth Care, 2019). Conclusions were that violence was present throughout facilities and time, and that youth in residential care still experience the residential group climate as hard, unsafe and repressive.

An urgent call is issued with regard to research in order to improve residential youth care on a variety of topics, like residential group climate, safety, collaboration with caretakers and aftercare (De Lange, Addink, Haspels, & Geurts, 2015).

Wissink, Creemers, Moonen and Stams (2019) argued that the cause of violence in residential youth care is not directly related to individual characteristics of youth, staff or their mutual relationships. They contend that violence is mainly determined by the residential care system. Rights of youth are not always sufficiently guaranteed in the form of legislation, adequate supervision or concrete measures to protect youth. One of these concrete measures could be opportunities for shared decision-making between youth, their representatives (e.g., parents or natural mentors) and professionals. Therefore, prevention of antisocial behavior and violence may only succeed if the environment is taken into account, especially in residential settings, where there are (extreme) power differences between youth and staff, discontinuity of care and limited possibilities for youth to maintain relationships with their parents or caretakers (See Barton & Mackin, 2012; Knotter, Stams, Moonen, & Wissink, 2018; Lambie & Randall, 2013; Van der Helm, Kuiper, & Stams, 2018; De Valk, Kuiper, Van Der Helm, Maas, & Stams, 2018). This dissertation focuses on the environment of residential youth care, namely, residential group climate, in particular from the perspective that residential group care should be a therapeutic environment free of violence, where youth receive the best available care, education, and treatment, with the ultimate aim of rehabilitation.

The interest in residential group climate goes back to the beginning of the twentieth century. Pioneers of therapeutic residential youth care in both Europe and North America rejected strict discipline and control (Addams, 1910; Korczak, 1925, 1992), favoring the focus on care and service delivery (Bettelheim, 1974; Bronfenbrenner, 1979; Gharabaghi & Phelan, 2011; Maier, 1987; Redl & Wineman, 1957). In the 1960's and 70's, several scholars warned against the drawback of coercive residential treatment (Fussinger, 2011; Russo & Carelli, 2009). Notably, Goffman (1961) considered residential facilities as total institutions, because all aspects of life are controlled within the residential facility, which may lead to loss of autonomy and hospitalization. The imposed rules and regulations, and behavioral instructions by staff are internalized by the residents by placing them in a constant field of supervision and coercion (Foucault, 1975). If control results in repression, which has been defined as an authority that 'intentionally acts in a way that harms the youth, or unlawfully or arbitrarily deprives the youth of liberty or autonomy' (De Valk, Kuiper, Van der Helm, Maas, & Stams, 2016, p. 205), antisocial behavior is likely to occur.

In this dissertation, antisocial behavior is broadly defined as behavior that psychically or psychologically harms others or their property, which shows lack of consideration for the well-being of others, or in the most severe cases violates the basic rights of others (Berger, 2003; Calkins & Keane, 2009; Stoff, Breiling, & Maser, 1997). Antisocial behavior emerges as aggression, delinquent behavior and violence

In recent years, researchers agree that residential group climate should be considered from the perspective of rehabilitation (Dozier et al., 2014; Whittaker, Del Valle & Holmes, 2015), paying attention to the basic needs of human self-determination, including competence, contact/relatedness, and autonomy (Ryan & Deci, 2000; Van der Helm, Kuiper, & Stams, 2018). However, terminology to define residential group climate in literature is diverse, and may encompass both aspects of institutional control and support. Therefore, Van der Helm, Kuiper, & Stams, 2018, defined residential group climate as 'the quality of the social- and physical environment in terms of the provision of sufficient and necessary conditions for physical and mental health, well-being, contact and personal growth of the residents, with respect for their human dignity and human rights, as well as (if not restricted by judicial measures) their personal autonomy, aimed at recovery and successful participation in society' (p. 340). It can be assumed that a therapeutic group climate facilitates self-determination and (intrinsic) motivation in youth to work on a positive change, which results in resilience, prosocial behavior and reduces the chance of antisocial behavior (Ryan & Deci, 2017; Van der Helm et al., 2018).

Antisocial behavior in residential facilities can be explained by different theoretical models. The importation hypothesis explains antisocial behavior of residents from the perspective of individual characteristics (Kuanling, Sorensen, & Cunningham, 2008; Gover, Mackenzie, & Armstrong, 2000), whereas the deprivation hypothesis explains antisocial behavior of residents through environmental characteristics, in particular the deprivation of autonomy through institutional repression (Souverein, Van der Helm & Stams, 2013; Sykes 1958). Furthermore, the relation between youth's antisocial behavior on the one hand and institutional repression on the other hand is theorized to be bi-directional, or in other words, they are assumed to mutually influence each other. For example, most youth placed in residential facilities have had negative experiences with authority (Loeber, Slot, Van der Laan, & Hoeve, 2010; Shapiro, 2010), and perceived institutional repression may (have) confirm(ed) their views of adults as unreliable, and as persons who misuse their power (De Valk, 2019). This is assumed to lead to social problem behavior and subsequently antisocial behavior. An exceptionally asymmetric balance of power, arbitrary rules, punishments and boredom can lead to frustration and hostility. Additionally, there

is competition among peers (Harvey, 2007; Liebling & Maruna, 2005; Little, 1990), which demands specific coping skills of the youth. One needs to show toughness in order not to be taken advantage of by others (Anderson, 2000; De Jong, 2007). In a harsh environment, needing or giving help may be considered as a sign of vulnerability (De Jong, 2007). Peer status, and thereby protection from others, is attained by defying authority and repressing peers (Harvey, 2007; Van der Helm, Stams, Van der Stel, Van Langen, & Van der Laan, 2012). Social problem behavior may therefore hamper the development of a therapeutic group climate, and may even result in repression and unsafety. It is therefore essential to gain more insight in the relation between social problem behavior and residential group climate.

In conclusion, youth placed in residential care facilities that provide 24-hour therapeutic care often have a history of antisocial behavior, such as aggression, delinquent behavior or violence (Collin-Vézina, Coleman, Milne, Sell, & Daigneault, 2011; Harder, 2011; Loeber, Slot, Van der Laan, & Hoeve, 2010). Antisocial behavior of youth in residential care not only hampers rehabilitation, it may also result in institutional repression and eventually violence exerted by both youth and staff. It is therefore imperative that residential care facilities provide a safe environment, in which youth's basic needs of self-determination can be fulfilled, effective evidence-based treatment can be delivered, and antisocial behavior can be substantially reduced or remediated. The purpose of this dissertation is therefore to address an important gap in literature by examining the associations between residential group climate and juvenile antisocial behavior, because it is assumed that a therapeutic group climate is the first necessary condition for effective treatment of antisocial behavior, and subsequently, for successful rehabilitation efforts (Stams & Van der Helm, 2017).

The first aim of this dissertation was to gain insight in the relation between residential group climate and antisocial behavior by examining the association between group climate and social problem behavior, which has been shown to be a precursor of antisocial behavior (Fluttert, Van Meijel, Van Leeuwen, Bjørkly, Nijman, & Grypdonck, 2011; Van der Helm, Stams, & Van der Laan., 2011; Van der Helm et al., 2013). Social problem behavior was measured with the TOPS-A, which has been validated for residential youth care (Van der Helm et al., 2013) and assesses inappropriate responses to four types of problematic social situations – including situations of disadvantage, competition, accepting or giving help, and accepting authority – from the perspective of aggressiveness-related deficiencies in social information processing.

The second aim of this dissertation was to investigate whether individual characteristics (importation model) or the institutional environment (deprivation model) best explains antisocial

behavior of youth in residential facilities in terms of aggression (DeLisi, Trulson, Marquart, Drury, & Kosloski, 2011; Gover et al., 2000; Jiang and Fisher-Giorlando, 2002). Notably, Lambie and Randall (2013) reviewed the literature on the impact of incarceration on juvenile offenders, and they concluded that detention of juvenile offenders, as a means of public protection, is not effective in terms of cost and outcome, while the interaction between individual and environmental factors elicits and maintains the conduct problems and delinquent behavior of the adolescent offenders. In line with the importation model, boys (as an individual characteristic) have been shown to exhibit more aggressive and delinquent behavior than girls (e.g., Attar-Schwartz, 2008; Glisson, Hemmelgarn, & Post, 2002; Schiff & Benbenishty, 2006). Studies of Cunningham and Sorensen (2006, 2007), DeLisi, Berg, & Hochstetler, 2004; and Vassallo et al. (2016) showed that younger age was also predictive of aggressive behavior in residential facilities. However, also empirical evidence for the deprivation model came from scientific research. That is, youth in residential youth care were found to often act aggressively in response to frustrating conditions within their residential facilities (Sekol, 2013). Harer and Steffensmeier (1996) found the level of openness of the facility to be related to antisocial behavior. The higher the level of security, or the more 'closed' the facilities were, the higher the number of aggressive incidents.

The third aim of this dissertation was to study the (bi-directional) association between residential group climate and antisocial behavior in terms of aggression and incidents in different types of residential youth care facilities. First of all, differences in quality of residential group quality (i.e., the degree to which residential group climate meets therapeutic requirements) may be affected by selective placement of youth. For instance, it is plausible to suggest that the aggregation of antisocial youth in particular living groups, resulting in deviancy training (Dishion, McCord, & Poulin, 1999), or forensic high security residential facilities, limiting their autonomy, may have a direct negative impact on residential group climate. The association between residential group climate and antisocial behavior could be influenced by the security level of the facility. However, research shows ambiguous results. Gover et al. (2000) and Harer and Steffensmeier (1996) found that more secure facilities bring along more antisocial behavior in terms of aggression, independently of residential group climate. On the contrary, Camp and Gaes (2005) found no relation between type of facility and the level of aggressive behavior, and Davidson-Arad (2005) even found that aggressive behavior was more common in open facilities than in secure facilities.

Robinson, Craig and Tonkin (2018) were the first to conduct a narrative review of the literature on group climate and antisocial behavior in terms of aggression. They found that in most

studies a therapeutic group climate was associated with less client aggression. However, in a number of studies no significant association was found. This discrepancy was explained by different facilities serving various populations, and the use of different group climate questionnaires and measures of aggression. Leipoldt et al. (2019) conducted a narrative review and found empirical support in several studies for a positive association between therapeutic group climate, designated as social climate, and desired youth outcomes. However, they also discovered large heterogeneity within and between studies, which was attributed to the variation in the concepts and operationalizations of residential group climate. The fourth aim of this dissertation, therefore, was to conduct a quantitative review of the literature (i.e., three level meta-analysis) on the relation between residential group climate and antisocial behavior of juvenile and (young) adult residents in order to be able to examine the strength of the association between residential group climate and antisocial behavior, accounting for the impact of moderators that may explain within and between study heterogeneity.

Outline of the dissertation

In the first study (Chapter 2), the relation between residential group climate and reactions to social problem situations (i.e., social problem behavior) is examined in a sample of N = 128 youth. Chapter 3 reports on a study that examines the relation between residential group climate and aggression from the perspective of the importation and deprivation model in a sample of N = 198 youth in residential youth care. Chapter 4 describes results from a study (N = 159 youth) examining the relation between residential group climate, self-reported aggression and aggressive incidents in open, semi-secure and secure residential youth facilities. Finally, Chapter 5 is a meta-analysis (including 23 studies) on the relation between residential group climate and antisocial behavior. Chapter 6 provides an overall conclusion, where the results of the four empirical studies are discussed in light of current knowledge on residential group climate. Additionally, the strengths and limitations of the dissertation are summarized. The chapter concludes with suggestions for future research and implications for residential youth care.

References

Addams, J. (1910). *Twenty years at Hull House*. New York, NY: Macmillan.

Anderson, E. (2000). *Code of the street. Decency, violence and the moral life of the inner city*. London, UK: Norton & Company.

Attar-Schwartz, S. (2008). Emotional, behavioral and social problems among Israeli children in residential care: A multi-level analysis. *Children and Youth Services Review*, *30*(2), 229–248. https://doi.org/10.1016/j.childyouth.2007.09.009

Barnert, E., Perry, R., & Morris, R. (2016). Juvenile Incarceration and Health. *Academic Pediatrics*, *16*(2), 99–109. https://doi.org/10.1016/j.acap.2015.09.004

Barton, W., & Mackin, J. (2012). Towards a strength-based juvenile correctional facility: Sustainability and effects of an institutional transformation. *Journal of Offender Rehabilitation, 51*(7), 435–452. https://doi.org/10.1080/10509674.2012.700688

Berger K. S. (2003). *The developing person through childhood and adolescence* (6th ed.). Worth Publishers.

Bettelheim, B. (1974). *A home for the heart*. New York: Knopf

Bronfenbrenner, U. (1979). *Ecology of human development*. Cambridge, MA: Harvard University Press.

Bruning, M. R., Liefaard, T., & Volf, L. M. Z. (2004). *Rechten in justitiële jeugdinrichtingen*. Vrije Universiteit.

Calkins S. D., & Keane, S. P. (2009). Developmental origins of early antisocial behavior, *Development and Psychopathology, 21*(4): 1095–109. https://doi.org/10.1017/S095457940999006X

Camp, S. D., & Gaes, G. G. (2005). Criminogenic effects of the prison environment on inmate behavior: Some experimental evidence. *Crime & Delinquency, 51*(3), 425–442.

Collin-Vézina, D., Coleman, K., Milne, L., Sell, J., & Daigneault, I. (2011). Trauma Experiences, Maltreatment-Related Impairments, and Resilience Among Child Welfare Youth in Residential Care. *International Journal of Mental Health and Addiction*, *9*(5), 577–589. https://doi.org/10.1007/s11469-011-9323-8

Commissie Geweld in de Jeugdzorg (Committee Violence in Youth Care), 2019. Via https://www.commissiegeweldjeugdzorg.nl/eindrapport/

Cunningham, M., & Sorensen, J. (2006). Nothing to Lose? A Comparative Examination of Prison Misconduct Rates Among Life-Without-Parole and Other Long-Term High-Security

Inmates. *Criminal Justice and Behavior*, *33*(6), 683–705. https://doi.org/10.1177/0093854806288273

Cunningham, M., & Sorensen, J. (2007). Predictive Factors for Violent Misconduct in Close Custody. *The Prison Journal*, *87*(2), 241–253. https://doi.org/10.1177/0032885507303752

Davidson-Arad, B. (2005). Observed violence, abuse, and risk behaviors in juvenile correctional facilities: Comparison of inmate and staff reports. *Children and Youth Services Review, 27*(5), 547–559.

De Jong, J. D. (2007). Kapot moeilijk, een etnografisch onderzoek naar opvallend delinquent groepsgedrag van 'Marokkaanse' jongens ('Dire Straits', An Ethnographic Inquiry Into Obtrusive Delinquent Group Activity Of Moroccan Boys). Amsterdam, The Netherlands: Aksant. http://irs.ub.rug.nl/ppn/304972592

De Lange, M. D., Addink, A. M., Haspels, M., & Geurts, E. (2015). Richtlijn Residentiële jeugdhulp voor jeugdhulp en jeugdbescherming [Directive of residential youth care]. *Utrecht, the Netherlands: Beroepsvereniging van Professionals in Sociaal Werk/Nederlands Instituut van Psychologen/Nederlandse vereniging van pedagogen en onderwijskundigen*.

DeLisi, M., Berg, M. T., & Hochstetler, A. (2004). Gang members, career criminals and prison violence: Further specification of the importation model of inmate behavior. *Criminal Justice Studies, 17*(4), 369–383.

Delisi, M., Trulson, C., Marquart, J., Drury, A., & Kosloski, A. (2011). Inside the Prison Black Box: Toward a Life Course Importation Model of Inmate Behavior. *International Journal of Offender Therapy and Comparative Criminology*, *55*(8), 1186–1207. https://doi.org/10.1177/0306624X11383956

De Valk, S. (2019). *Under pressure : repression in residential youth care* . Ridderprint BW, Netherlands.

De Valk, S., Kuiper, C., van Der Helm, G., Maas, A., & Stams, G. (2018). Measuring Repression in Residential Youth Care: Conceptualization, Development and Validation of the Institutional Repression Questionnaire. *Adolescent Research Review*. https://doi.org/10.1007/s40894-018-0091-6

De Valk, S., Kuiper, C., Van der Helm, G. H. P., Maas, A. J. J. A., & Stams, G. J. J. M. (2016). Repression in residential youth care: A scoping review. *Adolescent Research Review*, *1*(3), 195-216.

Dishion, T., Mc Cord, J., & Poulin, F. (1999). When Interventions Harm: Peer Groups and Problem Behavior. *American Psychologist*, *54*(9), 755–764. https://doi.org/10.1037/0003-066X.54.9.755

Dozier, M., Kaufman, J., Kobak, R., O'connor, T., Sagi-Schwartz, A., Scott, S., … Zeanah, C. (2014). Consensus Statement on Group Care for Children and Adolescents: A Statement of Policy of the American Orthopsychiatric Association. *American Journal of Orthopsychiatry*, *84*(3), 219–225. https://doi.org/10.1037/ort0000005

Fazel, S., Doll, H., & Långström, N. (2008). Mental Disorders Among Adolescents in Juvenile Detention and Correctional Facilities: A Systematic Review and Metaregression Analysis of 25 Surveys. *Journal of the American Academy of Child & Adolescent Psychiatry*, *47*(9), 1010–1019. https://doi.org/10.1097/CHI.ObO13e31817eecf3

Fluttert, F., Van Meijel, B., Van Leeuwen, M., Bjørkly, S., Nijman, H., & Grypdonck, M. (2011). The Development of the Forensic Early Warning Signs of Aggression lnventory: Preliminary findings: Toward a Better Management of Inpatient Aggression. *Archives of Psychiatric Nursing*, *25*(2), 129–137. https://doi.org/10.1016/j.apnu.2010.07.001

Foucault, M., & Mailänder, E. (1975). *Surveiller et punir* (Vol. 225). na.

Fussinger, C. (2011). "Therapeutic community", psychiatry's reformers and antipsychiatrists: reconsidering changes in the field of psychiatry after World War II. *History of Psychiatry*, *22*(2), 146–163. https://doi.org/10.1177/0957154X11399201

Gharabaghi, K., & Phelan, J. (2011). Beyond control: Staff perceptions of accountability for children and youth in residential group care. *Residential Treatment for Children & Youth*, *28*(1), 75-90.

Glisson, C., Hemmelgarn, A., & Post, J. (2002). The Shortform Assessment for Children: An Assessment and Outcome Measure for Child Welfare and Juvenile Justice. *Research on Social Work Practice*, *12*(1), 82–106. https://doi.org/10.1177/104973150201200107

Goffman, E. (1961). *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates*. Dubledzay.

Gover, A. R., Mackenzie, D. L., & Armstrong, G. S. (2000). Importation and deprivation explanations of juveniles' adjustment to correctional facilities. *International Journal of Offender Therapy and Comparative Criminology*, *44*(4), 450-467.

Harder, A.T. (2011). *The downside up? A study of factors associated with a successful course of treatment for adolescents in secure residential care.* s.n. (Groningen: s.n.) Prom./coprom.: E.J. Knorth.

Harder, A. T., Kalverboer, M. E., Knorth, E. J. (2011). They have left the building: a review of aftercare for adolescents in residential child and youth care. *International Journal of Child and Family Welfare, 14*, 86–104.

Harder, A., Knorth, E., & Kalverboer, M. (2013). A secure base? The adolescent–staff relationship in secure residential youth care. *Child & Family Social Work*, *18*(3), 305–317. https://doi.org/10.1111/j.1365-2206.2012.00846.x

Harer, M. D., & Steffensmeier, D. J. (1996). Race and prison violence. *Criminology, 34*, 323–355. https://doi.org/10.1111/j.1745-9125.1996.tb01210.x

Harvey, J. (2007). *Young men in prison. Surviving and adapting to life inside*. Cullompton, UK: Willan Publishing.

Jiang, S., & Fisher-Giorlando, M. (2002). Inmate Misconduct: A Test of the Deprivation, Importation, and Situational Models. *The Prison Journal*, *82*(3), 335–358. https://doi.org/10.1177/0032885502082003003

Jones, L. (2008) Continuity of care and outcomes in residential care: A comparison of two care giving models, *Residential Treatment for Children & Youth*, 23:3-4, 119-138, https://doi.org/10.1080/08865710609512720

Knotter, M. H., Stams, G. J. J. M., Moonen, X. M. H., & Wissink, I. B. (2016). Correlates of direct care staffs' attitudes towards aggression of clients with intellectual disabilities. *Research in developmental disabilities*, *59*, 294-305. https://doi.org/10.1016/j.ridd.2016.09.008

Korczak, J. (1925/1992). *When I am little again and the child's right to respect*. New York, NY: University Press of America.

Kuanling, A., Sorensen, J. R., & Cunningham, M. D. (2008). Juvenile inmates in an adult prison system: Rates of disciplinary misconduct and violence. *Criminal Justice and Behavior, 35,* 1186–1201. https://doi.org/10.1177/0093854808322744.

Lambie I., & Randall I. (2013). The impact of incarceration on juvenile offenders, *Clinical Psychology Review 33* (2013) 448-459.

Leipoldt, J., Harder, A., Kayed, N., Grietens, H., & Rimehaug, T. (2019). Determinants and outcomes of social climate in therapeutic residential youth care: A systematic review. *Children and Youth Services Review*, *99*, 429–440. https://doi.org/10.1016/j.childyouth.2019.02.010

Leloux-Opmeer, H., Kuiper, C., Swaab, H., & Scholte, E. (2016). Characteristics of Children in Foster Care, Family-Style Group Care, and Residential Care: A Scoping Review. *Journal of Child and Family Studies, 25*(8), 2357–2371. https://doorg/10.1007/s10826-016-0418-5

Liebling, A., & Maruna, S. (2005). Introduction: the effects of imprisonment revisited. In A. Liebling & S. Maruna (Eds.), *The effects of imprisonment* (pp. 1–32). Cullompton, UK: Willan Publishing.

Little, M. (1990). *Young men in prison*. Worcester, UK: Billing & Sons.

Loeber, R., Slot, N. W., Van der Laan, P. H., & Hoeve, M. (2010). *"Criminele kinderen en toekomstige misdadigers: De kernvragen [Child delinquents and tomorrow's serious delinquents: Key questions addressed*]." In R. Loeber, N. W. Slot, P. H. Van der Laan, M. Hoeve, & D. Graas. (Eds.), *Misdadigers van morgen? Over de ontwikkeling en effectieve aanpak van jeugddelinquentie onder twaalfminners* (pp. 9–20). Amsterdam, The Netherlands: SWP.

Maier, G. J., Stava, L. J., Morrow, B. R., Van Rybroek, G. J., & Bauman, K. G. (1987). A model for understanding and managing cycles of aggression among psychiatric inpatients. *Psychiatric Services*, *38*(5), 520-524.

Nederlands Jeugdinstituut (NJI), 2019. *Speerpunten voor residentiële jeugdhulp; Verbindend werken met kinderen en gezinnen. [Cornerstones in residential youth care; collaborating with children and families]*. https://www.nji.nl/nl/Download-NJi/Speerpuntenagenda-uitgebreide-versie.pdf

Redl, F., & Wineman, D. (1951). *Children who hate: the disorganization and breakdown of behavior controls.* New York, NY, US: Free Press.

Robinson, J., Craig, L., & Tonkin, M. (2018). Perceptions of Social Climate and Aggressive Behavior in Forensic Services: A Systematic Review. *Trauma, Violence, & Abuse*, *19*(4), 391–405. https://doi.org/10.1177/1524838016663936

Russo G.; Carelli F. (May 2009). "Dismantling asylums: The Italian Job" (PDF). *London Journal of Primary Care*

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55(1), 68–78.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.

Schiff, M., & Benbenishty, R. (2006). Functioning of Israeli group-homes alumni: Exploring gender differences and in-care correlates. *Children and Youth Services Review*, *28*(2), 133–157. https://doi.org/10.1016/j.childyouth.2005.02.010

Schulze, H. J. (2000). *Stability & complexity: perspectives for a child-oriented family policy*. VU University Press.

Sekol, I. (2013). Peer violence in adolescent residential care: A qualitative examination of contextual and peer factors. *Children and Youth Services Review, 35*(12), 1901–1912.

Shapiro, R. (2010). *The trauma treatment handbook: Protocols across the spectrum*. WW Norton & Company.

Souverein, F. A., Van der Helm, G. H. P., & Stams, G. J. J. M. (2013). 'Nothing works' in secure residential youth care? *Children and Youth Services Review, 35*(12), 1941–1945.

Stams, G. J., & van der Helm, P. (2017). What Works in Residential Programs for Aggressive and Violent Youth? *The Wiley handbook of violence and aggression*, 1-12.

Stoff, D. M., Breiling, J., & Maser, J. D. (1997). *Handbook of antisocial behavior*. New York: Wiley.

Sykes, G. (1958). *The society of captives*. Princeton: Princeton University Press.

Ten Brummelaar, M. D. C., Boendermaker, L., Harder, A. T., & Knorth, E. J. (2011). *JeugdzorgPlus. Trajectzorg voor jeugdigen met ernstige gedragsproblemen [Youth Care Plus. Transitional care for young people with serious behavioral problems*]. Groningen: Kinderstudies Publishers.

Van der Poel, A., Rutten, E., & Sondeijker, F. (2008). *Methode Jeugdzorgplus: Meer dan gesloten jeugdzorg [Method Jeugdzorgplus: More than compulsory residential care].* Woerden: Adviesbureau Van Montfoort.

Van der Helm, P., Boekee, I., Stams, G., van der Laan, P., & Forensic Child and Youth Care. (2011). Fear is the key: keeping the balance between flexibility and control in a Dutch youth prison. *Journal of Children's Services*, *6*(4), 248–263. https://doi.org/10.1108/17466661111190947

Van Der Helm, G., Kuiper, C., & Stams, G. (2018). Group climate and treatment motivation in secure residential and forensic youth care from the perspective of self determination theory. *Children and Youth Services Review*, *93*, 339–344. https://doi.org/10.1016/j.childyouth.2018.07.028

Van Der Helm, G., Matthys, W., Moonen, X., Giesen, N., van Der Heide, E., & Stams, G. (2013). Measuring Inappropriate Responses of Adolescents to Problematic Social Situations in Secure Institutional and Correctional Youth Care: A Validation Study of the TOPS-A. *Journal Of Interpersonal Violence*, *28*(8), 1579–1595. https://doi.org/10.1177/0886260512468322

Van Der Helm, P., Stams, G., & van Der Laan, P. (2011). Measuring Group Climate in Prison. *The Prison Journal*, *91*(2), 158–176. https://doi.org/10.1177/0032885511403595

Van der Helm, G.H.P., Stams, G.J.J.M., Van der Stel, J.C., Van Langen, M. A.M., & Van der Laan, P.H. (2012). Group climate and empathy in a sample of incarcerated boys. *International Journal of Offender Therapy and Comparative Criminology, 56*, 1149–1160. https://doi.org/10.1177/0306624X11421649

Vassallo, S., Edwards, B., & Forrest, W. (2016). Childhood behavior problems and fighting in early adulthood: What factors are protective? *Journal of Criminal Justice, 45,* 85–93.

Whittaker, J. K., Del Valle, J. F., & Holmes, L. (2015). The current landscape of therapeutic residential care. *Therapeutic Residential Care for Children and Youth: Developing Evidence-Based International Practice.* Philadelphia: Jessica Kingsley Publishers.

Wissink, I.B., Creemers, H.E., Moonen X.M.H., & Stams, G.J.J.M, (2019). *Hoofdstuk 4 Deelrapport 2 Commissie Geweld in de Jeugdzorg; Sectorstudie Geweld in de residentiële LVB-jeugdsector* [Chapter 4, Part 2, Committee Violence in Youth Care; Violence in Residential Care for Youth with mental disabilities]. Via https://www.commissiegeweldjeugdzorg.nl/binaries/WEB_121512_Eindrapport-Geweld-Deel2_tcm18-393484.pdf

CHAPTER 2

The relation between residential group climate and reactions to social problem situations in detained youth[1]

[1] Source: Eltink, E., Van Der Helm, P., Wissink, I., & Stams, G. (2015). The Relation between Living Group Climate and Reactions to Social Problem Situations in Detained Adolescents: "I Stabbed Him Because He Looked Mean at Me." International Journal of Forensic Mental Health, 14(2), 101–109. https://doi.org/10.1080/14999013.2015.1033110

Abstract

The present study examined the association between residential group climate and aversive reactions to social problem situations in youth in (semi-)secure residential facilities. The sample consisted of 128 boys and girls. A therapeutic group climate was associated with less aversive reactions to social problem situations Residential group climate had a negative relation with aversive reactions to social problem situations (β=-.632, p<.001). In particular, the relation between support from staff and youth's reactions to giving/accepting help, competition and social disadvantage proved to be mediated by reactions to authority. As staff represent authority in residential facilities, building supportive relationships with detained youth seems an important requirement for changing their aversive reactions to social problems situations. It is argued that staff should be trained in providing a therapeutic group climate in order to diminish aversive responses to social problem situations in detained youth.

Introduction

Youth with severe behavioural and criminal problems often have a mild intellectual disability, which might not be recognised (Kaal, Brand, & Van Nieuwenhuizen, 2012), psychiatric problems and/or severe trauma due to neglect, abuse and maltreatment (Widom, 1989). In the Netherlands, these youth are treated in semi-secure facilities or secure facilities (youth prisons) in living groups of 8-10 youth, supervised by two or more trained social workers. Aim of the treatment, designated as 'sociotherapy', is to learn to get along with others and society in general, to (re)start schooling, to develop prosocial attitudes and reduce problem behaviour (Van der Helm, 2011). Despite the fact that sociotherapy is common in (semi-) secure residential youth care, Marshall and Burton (2010) conclude that little is known about the effects and workings of it. Research is urgently needed as negative (Lipsey, 2009; Parhar, Wormith, Derkzen, & Beauregard, 2008) as well as positive (Garrdido, & Morales, 2007; Nijhof, Verhulst, Scholte, Van Dam, Veerman, & Engels, 2011) aspects of sociotherapy are found (for an oversight see: Souverein, Stams, & van der Helm, 2013).

Negative aspects of treatment in (semi-) secure facilities can be partly ascribed to youth's propensity to react aggressively to social problem situations ('import' hypothesis, Gover, McKenzie, & Amstrong, 2001). Other negative aspects are thought to result from the negative effects of incarceration itself ('deprivation' hypothesis, Dye, 2010; Gover et al., 2001; Parisi, 1982; Sykes, 1958; White, Shi, Mun, Hirschfeld, & Loeber, 2010). The deprivational model assumes that deprivation is induced by repression by staff, and a lack of safety.

On the other hand, a therapeutic group climate, characterized by responsive staff, possibilities for growth and a safe group atmosphere, has been shown to be negatively associated with aggression in a sample of detained boys (Van der Helm, Stams, Van Genabeek, & Van der Laan, 2012). In a therapeutic climate staff's authority is accepted and respected and dependency of youth on group workers is minimal. Youth are held responsible for their own conduct, resulting in an internal locus of control and an inclination to accept help from others (Van der Helm, Klapwijk, Stams, & Van der Laan, 2009) or to help others (Van der Helm, Stams, Van der Stel, & Van der Laan, 2012). Van der Helm (2011) even concluded that the positive effects of a perceived therapeutic group climate on the adaptation of detained youth were stronger than the effects of repression.

Recently, Schubert, Mulvey, Loughran and Losoya (2012) found positive perceptions of residential group climate and efficacious aftercare to reduce recidivism and self-reported behavior problems in juvenile delinquents. A recent review of young offenders by Koehler, Losel, Akoensi and Humpreys (2013) showed that purely deterrent and supervisory interventions slightly

increased juvenile recidivism. However, when treatment was the main goal, results were positive (7% reduction in recidivism see also: Lipsey, 2009), and when cognitive behavioural therapy was applied, reduction in recidivism rose to 13%. Best results occurred when treatment was delivered according to the Risks, Needs, and Responsivity principles from Andrews and Bonta (2010), which amounted to a reduction in recidivism of 16%. A meta-analysis by De Swart et al. (2012) examining the effects of residential youth care yielded moderate but favourable effects of evidence-based residential treatment, improving outcomes by 20%.

Interventions have been developed in the past to reduce antisocial behaviour in detained youth. Residential treatment and incarceration are very costly compared to non-residential treatment, and recidivism or behavioural problems place a great burden on society (Spelman, 2000) as well as the youth themselves. Unravelling possibilities for change in residential treatment could be a major step forward, according to Marshall and Burton (2009).

Residential group climate and problematic social information processing

Residential group climate matters for detained youth (Van der Helm, 2011). In group climate research a therapeutic group climate is often contrasted with a non-therapeutic group climate (Janzing & Kerstens, 2005; Toch, 2008, Toch & Kupers, 2007; Van der Helm, Stams, & Van der Laan, 2011). An environment is designated as therapeutic when, according to youth's perceptions, support is high, opportunities for growth are evident, and flexibility is in balance with the organizational needs for control (Clark Craig, 2004; Van der Helm, Boekee, Stams & Van der Laan, 2011; Ule, Schram, Riedl, & Cason, 2009; Wortly, 2002). A non-therapeutic residential group climate is characterized by an exceptionally asymmetric balance of power, great dependency on staff, lack of mutual respect, haphazard rules and punishment and extreme competition among peers (Harvey, 2005; Liebling & Maruna, 2005; Little, 1990), which could result in reactance, aggression and aversive reactions to social problem situations.

Saphiro, Smith, Malone and Collaro (2010) suggested that effective treatment could mitigate negative group processes (see also: Mager, Richard, Harris, & Howard, 2005; Weiss et al., 2005). Violence, destabilisation, hypercompetition and other aversive reactions to social problem situations can be seen as a continuation of previous negative experiences on the streets (Anderson, 2000). A non-therapeutic residential group climate is not only a continuation of prior adverse experiences, but also serves as a confirmation of hostile views of authorities and peers (Sato, Uono, Matsuura, & Toichi, 2009). When youth arrive in a residential forensic setting, they

have experienced many adversities, such as dropping out of school and being rejected in many social situations by peers and formal authorities (Savage, 2009).

Social problem behaviour is often a precursor of aggression at the living group (Fluttert, Van Meijel, Van Leeuwen, Bjørkly, Nijman, & Grypdonck, 2011; Van der Helm, Boekee et al., 2011: Van der Helm, Matthys, Moonen, Giesen, Van der Heijde, & Stams, 2013), and violence among the detained youth and staff may have great consequences for the safety of both youth and staff (DeLisi et al., 2009; Kury & Smart, 2002; Maitland & Sluder, 1998). In residential treatment for youth, frequent aggressive behavior often has a negative impact on social interactions and social learning, and could negatively affect treatment (Fontaine & Dodge, 2009; Osgood & O' Neil Bridell, 2006; Van der Helm, Boekee et al., 2011). On the other hand, positive social behavior at the living group can promote successful treatment of externalizing behavior and personality problems (Van der Helm, Van Genabeek & Van der Laan, 2011). Notably, of paramount importance in residential youth care is the therapeutic relationship between youth and staff (Van der Helm, Klapwijk, Stams, & Van der Laan, 2009), which is thought to first and foremost reflect youth's reactions to authority (Van der Helm et al., 2013).

Social Information Processing (SIP, Crick & Dodge, 1994) relates to the way social information is perceived, coded and processed. According to Dodge (1986), negative processing can lead to aggressive and/or antisocial behavior. Aggressive boys have been found to differ from non-aggressive boys in information processing when interviewed about problematic social situations (see Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002: Sato et al., 2009). Problematic social information processing has been found to express itself in difficulties to cope with competition among peers, problems in accepting authority, perceptions of being disadvantaged and having problems in accepting (or giving) help (Goldfried & D'Zurilla, 1969; Harvey, 2007; Van der Helm et al., 2013). These problems are intertwined in a (semi-) secure facility: hypercompetition demands special coping skills from youth, one needs to show toughness, and lack of fear, in order not to be taken advantage of by other peers (Anderson, 2000; De Jong, 2007). Being unable to cope with the perception of social disadvantage often causes feelings of bitterness and anger. These feelings can lead to hostility and diminished feelings of empathy for others (Sato et al. 2009, Van der Helm, Stams, Van der Stel et al., 2012). In a harsh environment, needing or giving help may be considered as a sign of vulnerability (De Jong, 2007). Finally, youth in (semi-) secure facilities tend to face a long history of failures at school and conflicts with authorities (Loeber, Slot, van der Laan, & Hoeve, 2009; Shapiro et al., 2010). Failure to accept authority reflects inadequate social information processing (Crick and Dodge, 1994; Sato et al.,

2009), and often aggravates behavioral problems (Granic & Patterson, 2006; Laird & Marrero, 2010).

Peer status, and thereby protection of violence from others is attained by defying authority and repressing peers (Harvey, 2007; Van der Helm, Stams & Van der Stel et al, 2012). Research has indeed shown that detained youth who feel safe at the living group feel safe because they are able to defend themselves (Eichelsheim & Van der Laan, 2012; Van der Helm et al., 2009).

The perceived advantages of a defying, aggressive peer status hamper the development of a therapeutic residential group climate. A therapeutic group climate facilitates social learning and subsequently a better handling of social problem situations. As such, the living group offers a training ground for practising social problem situations, and a challenging one because of the aggregation of youth with behavioral problems within these living groups.

The present study

The main question of this study is whether a therapeutic residential group climate is related to less aversive handling of social problem situations in male and female youth living in (semi-) secure residential youth care. It is hypothesised that a therapeutic group climate is associated with less aversive reactions to problematic situations (as perceived by the youth). In a therapeutic group climate staff's authority is accepted, and dependency of youth on staff is minimal. Youth feel more responsible for their own conduct, resulting in an internal locus of control and an inclination to accept help from others (Van der Helm et al., 2009) or to help others (Van der Helm et al., 2013). In sum, the SIP theoretic background and previous research finding support the hypothesis of the current study that a therapeutic residential group climate is related to less aversive handling of social problem situations.

Method

Participants

The present study was conducted in three facilities for residential youth care (Almata, Transferium, and Avenier) in the Netherlands, at five different sites. Four sites provide semi-secure youth care for justice-involved youth and one site is a juvenile correctional facility (secure facility). A total of 128 adolescent boys (62%) and girls (38%), living in these (semi-) secure juvenile facilities, participated: 105 (82%) youth (58 boys and 47 girls) lived in a semi-secure facility, and 23 boys (18%) lived in a secure (juvenile correctional) facility. The mean age of youth was 15.7 years (*SD* = 1.4, range 12-19 years). The mean age of the juvenile justice population was 17 years

(SD=1.0, range 14-19 years). A total of 40%, *n*= 51, of the youth had a non-Western cultural background. Youth living in semi-secure institutional youth care had been referred by a judge because of serious conduct problems (e.g., conduct disorder), often among other problems. The youth residing in secure youth care (yuvenile correctional facility) were sentenced or taken into detention before trial. The mean stay at the time of filling out the questionnaire was 28 weeks (SD = 15.2 range 1-74 weeks).

Procedure

All youth present in the facilities were invited to participate in the present study and participated voluntarily (response rate of 95%). They all signed an informed consent declaration and were told that their answers would be treated confidentially and anonymously, and would be accessed only by the researchers. As a token of gratitude for their participation, participants received a telephone card or a small gift of €5.50. All names on the questionnaires were deleted and given a code number in SPSS. In order to protect the privacy of the youth, researchers had no access to the names. Questionnaires were administered by specially trained graduate students of the Leiden School of Social Studies (Bachelor of Social Work and master Youth care) and the University of Amsterdam (Department of Forensic Child and Youth Care Sciences).

Measures

Prison Group Climate Inventory (PGCI; Van der Helm, Stams, & Van der Laan, 2011). The PGCI consists of 36 items rated on a five-point Likert-type scale, ranging from 1 = 'I do not agree' to 5 = 'I totally agree'. Each item belongs to one of the four scales for residential group climate. The support scale (12 items) assesses perceived professional behaviour and in particular the responsivity of staff to specific needs of the youth. Paying attention to youth, taking complaints seriously, respect and trust are important characteristics of support. An example of a support item is: 'Group workers treat me with respect'. The growth scale (eight items) assesses learning perceptions, hope for the future and giving meaning to prison stay. An example of a growth item is: 'I learn the right things here'. The repression scale (nine items) assesses perceptions of strictness and control, unfair and haphazard rules, and lack of flexibility at the living group. An example of a repression item is: 'You have to ask permission for everything here'. The group atmosphere scale (seven items) assesses the way youth treat and trust each other, feelings of safety towards each other, being able to get some peace of mind, and having enough daylight and fresh air. An example of a atmsophere item is 'We trust each other here'. Cronbach's alphas were

.92 for support, .70 for atmosphere, .78 for repression and .91 for growth. The PGCI was validated in 2011, showing favourable construct validity (confirmatory factor analysis) and reliability (Van der Helm, Stams & Van der Laan, 2011).

Taxonomy of Problematic Social Situations-Adolescent version (TOPS-A, Matthys, 2001). The TOPS-A was developed using Matthys' (2001) original observation instrument, and has been adapted and validated for self-report use in youth facilities by Van der Helm et al. (2013). The TOPS-A measures the extent of youth's aversive reactions to specific social problem situations, such as calling names, shoving others, but also negative thoughts about others ('When I lose, someone is cheating') and not cooperating with staff ('If a group worker wants to talk to me, I keep my mouth shut'). The questionnaire contains 22 items on a five-point Likert-type answering scale. The instrument has four scales: 'problematic reactions to being disadvantaged' (eight items), 'problematic reactions to facing competition' (five items), 'problematic reactions with accepting/giving help' (three items), and 'problematic reactions with accepting authority' (six items). The following questionnaire items are examples of aversive responses to social disadvantage – 'When others tell me I have the wrong clothes, I yell at them' – competition – 'When I lose, I quit playing' – accepting/giving help' – 'If someone else feels down, it is his/her problem' – and accepting authority –'If a group worker is talking, I just interrupt when I feel so'. Reliability coefficients of the four scales were as follows: accepting/giving help α = .69, competition α = .77; accepting authority α = .79, and social disadvantage, α =.81.

Statistical analysis

In preliminary analyses, differences in reactions to social problem situations (TOPS-A) and residential group climate (PGCI) were examined between youth from semi-secure youth care and the secure facility (juvenile correctional facility) in a series of t-tests. Next we examined simple correlations between the four scales of residential group climate and reactions to social problem situations.

A structural equation model linking residential group climate to youth's reactions to problematic situations was fitted to the data (see Figure 1). The latent variable 'residential group climate' was measured using the manifest variables of support, growth, repression, and atmosphere (i.e., the scales of the PGCI), while the latent variable 'social problem situations' was measured with the four TOPS-A scales (problematic reactions to being disadvantaged, facing competition, accepting/giving help, and accepting authority). Additionally, we controlled for gender and age by adding these variables to the model. An observed variance–covariance matrix was used as input

for the analysis. The maximum likelihood estimation yields estimates of regression coefficients, residual variances and covariances, as well as a chi-square (CHISQ) measure of overall goodness of fit, and the root mean square error of approximation (RMSEA). In addition, two other fit indices were used: the comparative fit index (CFI) and the Tucker-Lewis index (TLI). The chi-square test is a measure of exact fit. A significant chi-square value ($\alpha < .05$) indicates that the model does not fit the data well. A study by Hu and Bentler (1999) suggests that a cut-off value close to .95 for TLI and CFI and a cut-off value close to .06 for RMSEA are needed before we can conclude that there is a relatively good fit between the hypothesized model and the observed data.

Results

Preliminary analysis

T-tests were conducted to examine differences in reactions to social problem situations (TOPS-A) and residential group climate (PGCI) between youth from semi-secure residential youth care and the secure facility. Levene's tests showed that variances were equal between groups. No differences of means were found on the TOPS-A scales and on the growth scale of the PGCI. However, differences were found on repression, atmosphere and support (p <.05). Youth in the secure (correctional) facility experienced more support (Cohen's d = 0.54), less repression (Cohen's d = 0.48) and a more positive atmosphere (Cohen's d = 0.52). Despite differences in age and gender (see Method section, participants) and perception of residential group climate between the semi-secure and secure facility, groups were collapsed in the structural equation analysis, controlling for age and gender, in order to have a sufficiently large sample size to preserve statistical power.

Table 1 presents the means, standard deviations and (one-tailed significance) correlations among the four residential group climate factors (i.e., support, growth, repression and atmosphere) and four reactions to social problem situations (i.e., social disadvantage, competition, problems with accepting/giving help and problems with authority). The four climate factors were moderately to strongly (significantly) correlated with one another, between r =-.36 (p < .001, growth and repression) and r= .72 (p < .001, support and growth). Moderate to strong (significant) correlations were also found among the four reactions to social problem situations, ranging between r= .40 (p < .001, competition and giving/accepting help) and r= .64 (p < .001, social disadvantage and authority). Small to moderate significant associations were found between all climate factors and reactions to social problem situations, except for the relations between atmosphere and competition (r =-.14, p= .126) and growth and competition (r =-.09, p = .329).

Table 1. *Associations between residential group climate and social problem behavior: Means, Standard Deviations and Correlations*

	M	SD	1	2	3	4	5	6	7	8
Residential Group Climate										
1 Support	39.37	9.61	1							
(sig p=)										
2 Growth	27.68	8.40	.72	1						
(sig p=)			(.000)							
3 Repression	21.02	4.45	-.46	-.36	1					
(sig p=)			(.000)	(.000)						
4 Atmosphere	15.24	4.48	.67	.65	-.50	1				
(sig p=)			(.000)	(.000)	(.000)					
Social Problem Behavior (TOPS)										
5 Social Disadvantage	17.85	6.93	-.40	-.31	.30	-.33	1			
(sig p=)			(.000)	(.000)	(.001)	(.000)				
6 Competition	7.55	3.57	-.19	-.09	.28	-.14	.54	1		
(sig p=)			(.036)	(.329)	(.002)	(.126)	(.000)			
7 Accepting/giving help	7.71	3.13	-.36	-.26	.32	-.30	.47	.40	1	
(sig p=)			(.000)	(.003)	(.000)	(.001)	(.000)	(.000)		
8 Authority	11.04	4.84	-.49	-.38	.28	-.27	.64	.45	.52	1
(sig p=)			(.000)	(.000)	(.001)	(.002)	(.000)	(.000)	(.000)	

Structural equating modelling

The baseline model linking residential group climate (measured by support, growth, repression, and atmosphere) to youth's reactions to problematic situations (measured by aversive reactions to being disadvantaged, to facing competition, with accepting/giving help, and with accepting authority) and with the control for age and gender showed a close fit to the data: $\chi^2(31) = 50.194$, $p = .016$, RMSEA =.070, CFI = .957 and TLI = .939. However, modification indices showed that adding paths between the residual variances of problems with competition and social disadvantage ($\beta = .247$, $p = .013$), atmosphere and repression ($\beta = -.243$, $p = .005$) and atmosphere and growth ($\beta = .244$, $p = .014$) further improved model fit: $\chi^2(28) = 37{,}379$, $p = .111$ and RMSEA =.051, CFI =.979 and TLI =.967. Therefore, we added these paths to the model. The resulting model indicated that older youth ($\beta = -.284$, $p < .001$) and girls ($\beta = -.350$, $p < .001$) showed less aversive reactions to social problem situations compared to younger youth and boys, and girls perceived group climate as less positive than did boys ($\beta = -.232$, p .010).

A diagram of the resulting model is presented in Figure 1. It can be derived from Figure 1 that residential group climate has a negative relation with social problem situations ($\beta = -.632$, $p < .001$).

That is, the more therapeutic youth perceive the residential group climate to be, the less aversive reactions to social problem situations they report.

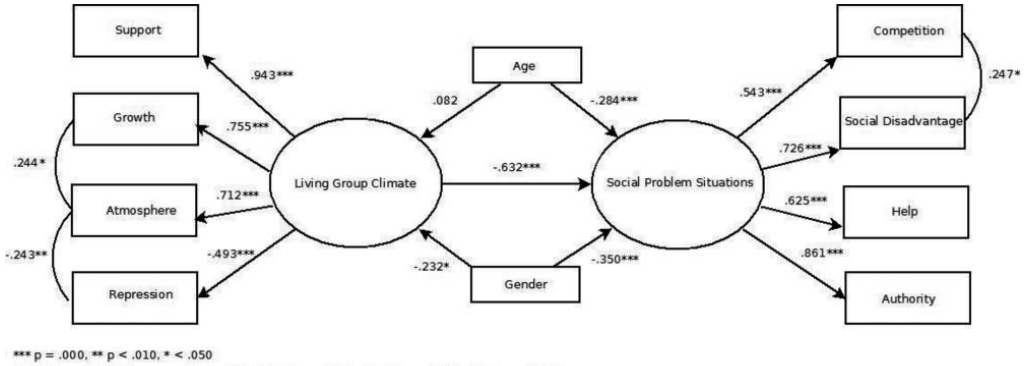

Figure 1. Structural equation model of the relation between group climate and social problem situations

Discussion

This study examined the relation between perceived aspects of residential group climate and self-reported responses to social problem situations in a group of youth placed in Dutch (semi-) secure facilities. The results showed an association between therapeutic group climate and less aversive handling of social problem situations. This is in line with research by Schubert and colleagues (2012), who found positive perceptions of group climate to reduce self-reported behavior problems in juvenile delinquents. Results further indicated that older youth and girls reported less aversive reactions to social problem situations than did younger youth and boys. Also, girls evaluated group climate as less positive than did boys. A possible explanation is that girls are less often referred to (semi-) secure residential youth care than boys, but when they eventually enter residential youth care problems have become worse than those of boys, which might translate in a more negative perception of residential group climate (Sonderman & Van der Helm, 2014). Another explanation, provided by Sonderman and Van der Helm, would be that the high prevalence of internalizing problems in detained girls is associated with a negative perception of residential group climate. Indeed, Sonderman and Van der Helm (2014) found both high levels of internalizing problems in detained girls and a relatively negative perception of group climate. However, in the present study differences in perception of residential group climate between girls and boys may also be accounted for by an unequal distribution of gender among the semi- secure

care and secure facility. In other words, gender and nature of the facility were confounded in our study.

Youth in the secure facility were somewhat older than those in the semi-secure residential facilities. Also, aversive reactions to social problem situations were negatively associated with age, that is, older youth reported less aversive reactions to social problem situations than younger youth. It seems plausible to suggest that the management of self-reputation is more difficult for younger than for older youth, which might be reflected in more aversive reactions to social problem situations (see Emler & Reicher, 1995). Findings of the current study reveal opportunities for staff to have a positive impact on youth's development at the living group by providing a supportive context that challenges aversive reactions to social problem situations. Detained youth must learn to cope with problematic social situations at the living group, involving situations of disadvantage, competition, accepting/giving help, and accepting authority, preparing them for life in society (Van der Helm et al., 2013). Maintaining the balance between control and flexibility is probably one of the main issues for staff (Van der Helm, Boekee et al., 2011), and seems of crucial importance when providing a positive context for social learning.

There are some limitations of this study that need to be acknowledged. First, the latent variables in the Structural Equation Model did not explain all covariance among the indicators, which indicates some potential measurement problems. Next, the sample size was too small to allow multi-group or multi-level analysis in order to account for dependency of measurements in hierarchically structured data. Future research should use larger samples allowing the examination of the relation between residential group climate and reactions to social problem situations in different age groups, boys, girls, mixed gender groups and different types of residential facilities (open, semi-secure and secure). Notably, youth in (semi-) secure residential youth care tend to be more susceptible for negative peer influences, have a more negative self- image, less insight in the effects of their behavior, lower frustration tolerance, more anger outbursts, and are more antisocial and aggressive than youth in open youth care (Vermaes & Nijhof, 2014). It would be interesting to examine whether such differences affect the relation between residential group climate and reactions to social problems situations of youth in residential youth care. Furthermore, the results of the current study were based on self-report measures only. This may have led to underrepresentation of aversive behavior and biased perceptions of group climate. However, it should be noted that self-report of behavior in problematic social situations also has an advantage over other-report, because in particular staff ratings may be too global, as they are collapsed across many social situations and may be unduly based on interactions with staff instead

of interactions among peers (see Foster, Inderbitzen, & Nangle, 1993; Nangle, Ellis, & Hansen, 1994). Nevertheless, ideally, future research should take staff ratings into account, in addition to self-report measures.

Marshall and Burton (2010) urgently called for a research-based framework to study living group dynamics in (semi-) secure residential care. Recent research on group dynamics in semi-secure facilities pointed to the key role staff play in establishing a therapeutic group climate and providing effective treatment (De Swart, 2011; Harder, Kalverboer, & Knorth, 2011; Lambert, Altheimer, Hogan, & Barton-Belessa, 2011; Ros et al., 2013; Souverein et al., 2013). In this respect, results from this study further emphasize that staff should facilitate a therapeutic group climate for detained youth, because a therapeutic group climate seems to be related to less aversive reactions to social problem situations.

We would like to argue that providing social skills training within the context of a therapeutic group climate and targeting distorted social information processing could diminish aversive responses to social problem situations in detained youth (Van der Helm et al., 2013). In residential youth care social skills training is often provided for a great number of youth suffering from behavioral problems (Maag, 2005), but effects of social skills training tend to be only modest (Losel & Beelmann, 2006; Maag, 2006). This study indicates that improving residential group climate could be a first step in improving effects of social skills training. At least, a therapeutic group climate appears to be associated with less aversive reactions to social problem situations, possibly making social skills training more effective.

The current study provides preliminary evidence for the association between perceptions of group climate and aversive reactions to social problem situations. Results should be replicated in a prospective, longitudinal study that allows for the examination of transactional processes and contextual effects by means of multi-level analyses. Ideally, self-reports should be combined with staff ratings and registered incidents (Ros et al., 2012).

Despite its limitations, this study is one of the few in which reactions to social problem situations are studied within (semi-) secure residential facilities. The results ask for further research in which the effects of social skills training on perceptions of residential group climate of detained youth is examined. Besides, it is important to study the possibilities for positively influencing the handling of social problem situations and for the expression of less aggression in interpersonal contact. When positive outcomes of residential interventions can be generalized to the domains of school, family and work (after detention), some progress could be made in the reduction of social problem behavior, providing a better future for youth with severe behavioral problems.

References

Anderson, E. (2000). Code of the street. Decency, violence and the moral life of the inner city. London, UK: Norton & Company.

Andrews, D. A., & Bonta, J. (2010). The psychology of criminal conduct. (5th ed.). Newark, NJ: LexisNexis.

Craig, C. S. (2004). Rehabilitation versus control: An organizational theory of prison management. The Prison Journal, 84, 928–1148. https://doi.org/10.1177/0032885504269394

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. Psychological Bulletin, 115, 74–101. https://doi.org/10.1037/00332909.115.1.74

De Jong, J. D. (2007). Kapot moeilijk, een etnografisch onderzoek naar opvallend delinquent groepsgedrag van 'Marokkaanse' jongens ('Dire Straits', An Ethnographic Inquiry Into Obtrusive Delinquent Group Activity Of Moroccan Boys). Amsterdam, The Netherlands: Aksant. http://irs.ub.rug.nl/ppn/304972592

DeLisi, M., Drury, A. J., Kosloski, A. E., Caudill, J. W., Conis, P. J., Anderson, C. A., Vaughn, M. G., & Beaver, K. M. (2010). The cycle of violence behind bars: Traumatization and institutional misconduct among juvenile delinquents in confinement. Youth Violence and Juvenile Justice, 8, 107–121. https://doi.org/10.1177/1541204009349399

De Swart, J.J.W. (2011). De professionele jeugdzorgwerker: Kenmerken van jeugdzorgwerkers in relatie tot kwaliteit van de jeugdzorg [the professional youth care worker: Characteristics of youth care workers in relation to quality of youth care]. Amsterdam: Vrije Universiteit. http:// hdl.handle.net/1871/24502.

De Swart, J., Van den Broek, H., Stams, G. J. J. M., Asscher, J. J., Van der Laan, P. H., Holbrink-Engels, G., & Van der Helm, G. H. P. (2012). The effectiveness of institutional youth care. Children and Youth Services Review, 34, 1818–1824. https://doi.org/10.1016/j.childyouth.2012.05.015

Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), Cognitive perspectives on children's social and behavioral development. Minnesota Symposia on Child Psychology (27, 18, pp. 77–125). Hillsdale, NJ: Erlbaum.

Dye, M. H. (2010). Deprivation, importation, and prison suicide: Combined effects of institutional conditions and inmate composition. Journal of Criminal Justice, 38, 796–806. https://doi.org/0.1016/j.jcrimjus.2010.05.007

Eichelsheim, V. I., & Van der Laan, A. M. (2012). Jongeren en vrijheidsbeneming: Een studie naar de wijze waarop jongeren in justitiele jeugdinrichtingen omgaan met vrijheidsbeneming (Juveniles and restriction of freedom: A study of juveniles' reactions to restriction of freedom in juvenile justice institutions). Den Haag; Boom Juridische uitgevers.

Emler, N., & Reicher, S. (1995). Adolescence and delinquency: The collective management of reputation. Oxford, UK: Blackwell.Anderson, E. (2000). *Code of the Street. Decency, Violence and the Moral Life of the Inner City.* London: Norton & Company

Fluttert, F., Van Meijel, B., Van Leeuwen, M., Bjørkly, S., Nijman, H., & Grypdonck, M. (2011). The development of the Forensic Early warning Signs of Aggression Inventory [FESAI]: preliminary findings. Towards a better management of inpatient aggression. *Archives of Psychiatric Nursing 25*, 129–137. https://doi.org/10.1016/j.apnu.2010.07.001

Fontaine, R. G., & Dodge, K. A. (2009). The transactional development of individual social information processing and aggressive behavior. In A. J. Sameroff (Ed.), *Transactional processes in development*. Washington, DC: American Psychological Association.

Foster, S. L., Inderbitzen, H. M., & Nangle, D. W. (1993). Assessing acceptance and social skills with peers in childhood current issues. *Behavior Modification*, *17*, 255–286. https://doi.org/10.1177/01454455930173003

Garrido, V., & Morales, L. A. (2007). Serious (violent or chronic) juvenile offenders: A systematic review of treatment effectiveness in secure cor- rections. *Campbell Systematic Reviews*, *7*. https://doi.org/10.4073/csr.2007.7

Goldfried, M. R., & D'Zurilla, T. J. (1969). A behavioural-analytic model for assessing competence. In C. D. Spielberger (Ed.), *Current topics in clinical and community psychology*. New York, NY: Academic Press.

Gover, A. R., MacKenzie, D. L., & Armstrong, G. S. (2000). Importation and deprivation explanations of juveniles' adjustment to correctional facilities. *International Journal of Offender Therapy and Comparative Criminology*, *44*, 450–467. https://doi.org/10.1177/0306624X00444004

Granic, I., & Patterson, G. R. (2006). Toward a comprehensive model of antisocial development: A dynamic systems approach. *Psychological Review*, *113*, 101–131. https://doi.org/10.1037/0033295X.113.1.101

Harder, A. T., Kalverboer, M. E., Knorth, E. J. (2011). They have left the building: a review of aftercare for adolescents in residential child and youth care. *International Journal of Child and Family Welfare*, *14*, 86–104.

Harvey, J. (2007). *Young men in prison. Surviving and adapting to life inside*. Cullompton, UK: Willan Publishing.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struc- tural Equation Modeling*, *6*, 1–55.

Janzing, C., & Kerstens, J. (2005). *Werken in een therapeutisch milieu*. Houten, The Netherlands: Bohn Stafleu van Loghem.

Kaal, H. L., Brand, F.J.M., & Van Nieuwenhuijzen, M. (2012). Serious juvenile offenders with and without intellectual disabilities, *Journal of Learning Disabilities and Offending Behaviour*, *2*, 66–76. https://doi.org/10.1108/20420921211280051

Koehler, J. A., Lösel, F., Akoensi, T. D., & Humphreys, D. K. (2013). A systematic review and meta-analysis on the effects of young offender treatment programs in Europe. *Journal of Experimental Criminology*, *9*, 19–43. https://doi.org/10.1007/s11292-012-9159-7

Kury, H. U., & Smartt, U. (2002). Prisoner on prisoner violence: victimisation of young offenders in prison. Some German findings. *Criminal Jus- tice*, *2*, 411–437. https://doi.org/10.1177/17488958020020040301

Laird, R. D., & Marrero, M. D. (2010). Information management and behavior problems: Is concealing misbehavior necessarily a sign of trouble? *Journal of Adolescence*, *33*, 297–308. Doi: 10.1016/j. adolescence.2009.05.018.

Lambert, E. G., Altheimer, I., Hogan, N. L., & Barton-Belessa, S. M. (2011). Correlates of correctional orientation in a treatment-oriented prison: A partial test of person-environment fit theory. *Criminal Justice and Behavior*, *38*, 453–471. https://doi.org/10.1177/0093854811400716

Liebling, A., & Maruna, S. (2005). Introduction: the effects of imprisonment revisited. In A. Liebling & S. Maruna (Eds.), *The effects of imprisonment* (pp. 1–32). Cullompton, UK: Willan Publishing.

Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims & Offenders*, *4*, 124–147. https://doi.org/10.1080/15564880802612573

Little, M. (1990). *Young men in prison*. Worcester, UK: Billing & Sons.

Loeber, R., Slot, N. W., van der Laan, P. H., & Hoeve, M. (2008). *Tomorrow's criminals: The development of child delinquency and effective interventions*. Hampshire, UK: Ashgate Publishing Ltd.

Loeber, R., Slot, N. W., Van der Laan, P. H., & Hoeve, M. (2010). "Criminele kinderen en toekomstige misdadigers: De kernvragen [Child delinquents and tomorrow's serious delinquents: Key questions addressed in this volume]." In R. Loeber, N. W. Slot, P. H. van der Laan, M. Hoeve, & D. Graas. (Eds.), *Misdadigers van morgen? Over de ontwikkeling en effectieve aanpak van jeugddelinquentie onder twaalfminners* (pp. 9–20). Amsterdam, The Netherlands: SWP.

Lösel, F., & Beelmann, A. (2003). Effects of child skills training on preventing antisocial behavior: A systematic review of randomized evaluations. *Annals of the American Academy of Political and Social Science*, *587*, 84–109.

Lösel, F. and Beelmann, A. (2006). Child skills training. In B. C. Welsh and D. P. Farrington (Eds.), *Preventing crime: What works for children, offenders, victims and places* (pp. 33–54). Dordrecht, The Netherlands: Wadsworth Publishing.

Maag, J. W. (2005). Social skills training for youth with emotional and behavioral disorders and learning disabilities: Problems, conclusions, and suggestions. *Exceptionality*, *13*, 155–172.

Maag, J. W. (2006). Social skills training for students with emotional and behavioral disorders: A review of reviews. *Behavioral Disorders*, *32*, 4–17. Mager, W., Richard, M., Harris, M.J., & Howard, A. (2005). Intervention Groups for Adolescents with Conduct Disorder: Is Aggregation Harmful or Helpful? *Journal of Abnormal Child Psychology*, *33*, 349–362. https://doi.org/10.1007/s10802-005-3572-6

Maitland, A. S., & Sluder, R. D. (1998). Victimization and youthful prison inmates: An empirical analysis. *The Prison Journal*, *78*, 55–73. https://doi.org/10.1177/0032855598078001005

Marshall, W. L., & Burton, D. (2010). The importance of group processes in offender treatment. *Aggression and Violent Behavior*, *15*, 141–149. https://doi.org/10.1016/j.avb.2009.08.008

Matthys, W., Maassen, G., Cuperus, J. M., & Van Engeland, H. (2001) The Assessment of the situational specificity of children's problem behaviour in peer-peer context. *Journal of Child Psychology and Psychiatry*, *42*, 413–420. https://doi.org/10.1111/1469-7610.00734

Nangle, D. W., Ellis, J. T., & Hansen, D. J. (1994). Clinical utility of the Taxonomy of Problematic Social Situations for Children (TOPS): Temporal stability and convergence with peer measures. *Education & Treatment of Children*, *17*, 129–138.

Nijhof, K., Verhulst, A., Scholte, H. J., van Dam, C., Veerman, J. W., & Engels, R.C.M.E. (2011). Psychopathic traits of Dutch adolescents in residential care: Identifying subgroups. *Journal of Abnormal Child Psychology*, *39*, 59–70. https://doi.org/10.1007/s10802-010-9445-7

Orobio de Castro, B., Veerman, J.W., Koops, W., Bosch, J. D., & Monshouwer, H. J. (2002). Hostile attribution of intent and aggressive behavior: a Meta analysis. *Child Development*, *73*, 916–934. https://doi.org/10.1111/1467-8624.00447

Osgood, D. W., & O'Neill Briddell, L. (2006). Peer effects in juvenile jus- tice. In K. Dodge, T. Dishion, & J. Lansford (Eds), *Deviant peer influences in programs for youth: Problems and solutions* (pp. 141–161). New York, NY: Guilford Press.

Parhar, K. K., Wormith, J. S., Derkzen, D. M., & Beauregard, A. M. (2008). Offender coercion in treatment: A meta-analysis of effective- ness. *Criminal Justice and Behavior*, *35*, 1109–1135. https://doi.org/10.1177/0093854808320169

Parisi, N. (1982). Prisoner's pressures and responses. In N. Parisi (Ed.), *Coping with imprisonment: Perspectives in Criminal Justice* (pp. 9–26). Beverly Hills, CA: Sage.

Ros, N., van der Helm, G.H.P., Wissink, I., Schaftenaar, P., & Stams, G.J.J.M., (2013). Institutional climate and aggression in a secure psychiatric setting. The *Journal of Forensic Psychiatry and Psychology*, *24*, 713–727. https://doi.org/10.1080/14789949.2013.848460

Sato, W., Uono, S., Matsuura, N., & Toichi, M. (2009). Misrecognition of facial expressions in delinquents. *Child and Adolescent Psychiatry and Mental Health*, *3*, 27–39. https://doi.org/10.1186/1753-2000-3-27

Savage, J. (Ed.) (2009). *The development of persistent criminality* (pp. 389–422). Oxford, UK: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195310313.003.0001

Schubert, C. A., Mulvey, E. P., Loughran, T. A., Losoya, S. (2012). Perceptions of institutional experiences and community outcomes for serious adolescent offenders. *Criminal Justice and Behavior*, *39*, 71–93. https://doi.org/10.1177/0093854811426710

Shapiro, C. J., Smith, B. H., Malone, P. S., & Collaro, A. (2010). Natural experiment in deviant peer exposure and youth recidivism. *Journal of Clinical Child and Adolescent Psychology*, *39*, 242–251. https://doi.org/10.1080/15374410903532635

Sonderman, J., & van der Helm, G.H.P. (2014). Sfeer is het sleutelwoord, meisjes in de gesloten jeugdzorg maken iets ander mee dan jongens. *Sozio*, 29–32.

Souverein, F. A., Van der Helm, G.H.P. & Stams, G.J.J.M. (2013). Nothing works in secure residential youth care? *Children and Youth Services Review*, *35*, 1941–1945. https://doi.org/10.1016/j.childyouth.2013.09.010

Spelman, W. (2000). What recent studies do (and don't) tell us about imprisonment and crime. *Crime and Justice*, *27*, 419–439.

Sykes, G. M. (1958). *The society of captives: A study of a maximum security prison*. Princeton, NJ: Princeton University Press.

Toch, H. (2008). Punitiveness as 'behavior management'. *Criminal Justice and Behavior*, *35*, 388–397. https://doi.org/10.1177/0093854807309427

Toch, H., & Kupers, T. A. (2007). Violence in prisons, revisited. *Journal of Offender Rehabilitation*, *45*, 1–28. https://doi.org/10.1300/J076v45n03_01

Ule, A., Schram, A., Riedl, A., & Cason, T. N. (2009). Indirect punishment and generosity towards strangers. *Science*, *326*, 1701–1704. https://doi.org/10.1126/science.1178883

Van der Helm, G.H.P. (2011). *First do no harm. Living group climate in secure juvenile correctional institutions*. Amsterdam, The Netherlands: SWP.

Van der Helm, G.H.P., Boekee, I., Stams, G.J.J.M., & Van der Laan, P. H. (2011). Fear is the key: keeping the balance between flexibility and control in a Dutch youth prison. *Journal of Children's Services*, *6*, 248–263. https://doi.org/10.1108/17466661111190947

Van der Helm, G.H.P., Stams, G.J.J.M., & Van der Laan, P. H. (2011). Measuring group climate in prison. *The Prison Journal*, *91*, 158–176. https://doi.org/10.1177/0032885511403595

Van der Helm, G.H.P., Stams, G.J.J.M., Van der Stel, J.C., Van Langen, M. A.M., & Van der Laan, P.H. (2012). Group climate and empathy in a sample of incarcerated boys. *International Journal of Offender Therapy and Comparative Criminology*, *56*, 1149–1160. https://doi.org/10.1177/0306624X11421649

Van der Helm, G.H.P., Stams, G.J.J.M., Van Genabeek, M., & van der Laan, P. H. (2012). Group climate, personality, and self-reported aggression in incarcerated male youth. *Journal of Forensic Psychiatry & Psychology*, *23*, 23–39. https://doi.org/10.1080/14789949.2011.633615

Van der Helm, G.H.P., Van Genabeek, M., Stams, G.J.J.M., & Van der Laan, P. H. (2011). Violence in youth prison; the role of group climate and personality. *Journal of Forensic Psychiatry & Psychology*, *1*, 23–40.

Van der Helm, P., Klapwijk, M., Stams, G.J.J.M., & Van der Laan, P. H. (2009). 'What works' for juvenile prisoners: The role of group climate in a youth prison. *Journal of Children's Services*, *4*, 36–48. https://doi.org/10.1108/17466660200900011

Van der Helm, P., Matthys, W., Moonen, X., Giesen, N., van der Heijde, E.S., & Stams, G.J.J.M. (2013). Measuring inappropriate responses of adolescents to problematic social situations in secure institutional and correctional youth care: A validation study of the TOPS-A. *Journal of Interpersonal Violence*, *28*, 1579–1595. https://doi.org/10.1177/0886260512468322

Vermaes, I. P. R., & Nijhof, K. S. (2014). Zijn jongeren in Jeugdzorgplus anders dan jongeren in de open residentiele jeugdzorg? *Orthopedagogiek: Onderzoek & Praktijk*, *53*, 33–46.

Weiss, B., Caron, A., Ball, S., Tapp, J., Johnson, M., & Weisz, J. R. (2005). Iatrogenic effects of group treatment for antisocial youths. *Journal of Consulting Clinical Psychology*, *73*, 1036–1044. https://doi.org/10.1037/0022-006X.73.6.1036

White, H. R., Shi, J., Hirschfield, P., Mun, E. Y., & Loeber, R. (2010). Effects of institutional confinement for delinquency on levels of depression and anxiety among male adolescents. *Youth Violence and Juvenile Justice*, *8*, 295–313. https://doi.org/10.1177/1541204009358657

Widom, C. S. (1989), Child abuse, neglect and violent criminal behavior. *Criminology*, *27*, 251–271. https://doi.org/10.1111/j.1745-9125.1989.tb01032.x

Wortley, R. K. (2002). *Situational prison control: Crime prevention in correctional institutions*. Cambridge, UK: Cambridge University Press.

CHAPTER 3

Stability or Change? Youth's aggressive behavior in residential youth care[2]

[2] Eltink, E., Ten Hoeve, J., De Jongh, T., Van der Helm, G., Wissink, I., & Stams, G. (2018). Stability and Change of Adolescents' Aggressive Behavior in Residential Youth Care. Child & Youth Care Forum, 47(2), 199–217. https://Doi.org/10.1007/s10566-017-9425-y

Abstract

Aggression in residential youth care facilities is a frequent problem. The present short-term longitudinal study examined individual and environmental predictors of aggression in a group of youth placed in open, semi-secure and secure residential facilities from the perspective of the importation and deprivation model. A total of 198 youth in residential youth care filled in questionnaires regarding residential group climate and aggression with a three month interval. Hierarchical multiple regression analyses were performed to test the degree to which individual and environmental factors predict aggression. Very limited support was found for the effect of environmental factors; only repression showed a trend, predicting direct aggression, while gender composition of the living groups yielded a small effect. Girls placed in same-gender groups showed lower levels of indirect (relational) aggression compared to youth placed in mixed-gender or boys-only groups, even when controlled for gender and initial levels of aggression. Type of facility (i.e., level of security) did not predict differences in aggression. In particular individual characteristics of the youth were associated with later aggression, including initial levels of aggression, showing substantial three months stability, age and gender of the youth. These findings are in line with research showing that aggression is relatively stable. Very limited support for environmental effects was found.

Introduction

Residential youth care includes a variety of facilities in which youth live in groups of 6-12 youth and receive treatment (Bastiaanssen et al., 2012; Barth, 2002; Frensch & Cameron, 2002). In the Netherlands, residential youth care is considered to be a last resort, and it is the most expensive and restrictive type of care (Harder, Knorth, & Kalverboer, 2012). Residential youth care facilities can be distinguished by their level of restrictiveness. In open facilities youth attend their school and leisure activities outside the facility. Semi-secure residential facilities offer care, schooling and treatment for youth with the most serious emotional and behavioral problems (Harder, 2011), which may be enforced by civil law. In these facilities youth's 'work' gradually towards more privileges, including leave to visit family or to attend school outside of the facility. In secure (correctional) facilities youth live within the confinement of the facility, and leave is an exception rather than the rule.

In the Netherlands, youth in open, semi-secure and secure facilities live in small groups (Bastiaanssen at al., 2012), where residential group climate is thought to have a direct effect on youth's development and is also assumed to moderate treatment effects (Marshall & Burton, 2010: Schubert, Mulvey, Loughran & Losoya, 2012; Van der Helm, 2011). Group climate in residential youth care has recently been defined as 'the quality of the social and physical environment in terms of the provision of sufficient and necessary conditions for physical and mental health, well-being and personal growth of the residents, with respect for their dignity and human rights as well as (if not restricted by judicial measures) their personal autonomy, aimed at successful participation in society' (Stams & Van der Helm, 2017). Several dimensions of residential group climate emerge in scientific literature, which may be considered as therapeutic, such as support from staff and opportunities for growth, or non-therapeutic, such as, repression (Boone, Althoff, & Koenraadt, 2016; De Valk, Kuiper, Van der Helm, Boekee, Maas & Stams, 2016; Tonkin, 2015; Van der Helm, Stams, & Van der Laan, 2011).

Aggression in residential youth care facilities is a frequent problem (Barzmann et al., 2011; Cornaggia, Beghi, Pavone, & Barale, 2011). It may lead to hospitalization, or can be provoked by the conditions of hospitalization itself (Bowers, 2011), which can prolong inpatient stay (Baeza et al., 2013). The persistent aggressive behavior problems of youth in residential youth care seem to lead to higher levels of behavioral control by staff, which may result in repression and a coercive cycle of interaction (De Valk et al., 2016; Vermaes & Nijhoff, 2014).

Aggression is most often defined as behavior that is intended to injure or harm someone physically or psychologically (Baron & Richardson, 2004; Bushman & Anderson, 2001). It is

considered to be the result of a complex interaction between personal, interpersonal, and circumstantial variables (Allen, Anderson, & Bushman, 2017; Mendes, Mari, Singer, & Barros, 2009). The defining characteristic of aggression is the intent to cause harm to another person, but the form that aggression takes can be either direct, such as a physical confrontation with the victim, or indirect, often referred to as relational aggression (Warren, Richardson, & McQuillin, 2011).

In residential youth care, aggression may be expressed verbally, such as bullying, or physically (Barter, Renold, Berridge, & Cawson, 2004; Sekol, 2013; De Decker et al., 2017). Notably, from research on bullying in prisons, it can be derived that exposure to frequent aggression and perceived threat of aggression may contribute to both a normalization of and desensitization to aggression. Additionally, the interaction between individual characteristics (i.e., aggressive tendencies) and the adverse (i.e., aggression-eliciting) environment reinforces aggression (Ireland 2002; Turner and Ireland 2010). Therefore, the development of aggression in residential facilities has been explained from the perspective of the importation and deprivation model (DeLisi, Trulson, Marquart, Drury, & Kosloski, 2011; Gover, MacKenzie, & Armstrong, 2000; Jiang & Fisher-Giorlando, 2002).

The importation model explains aggressive behavior from characteristics, experiences, and attitudes of the residents themselves, in particular tendencies to behave aggressively (Kuanling, Sorensen, & Cunningham, 2008; Gover, McKenzie, & Amstrong, 2000), while the deprivation model explains aggressive behavior of the residents (e.g., prisoners, justice-involved youth, youth staying in residential care because of serious psychopathology or lack of a safe home) from deprivation, repression and the loss of autonomy associated with detention (Sykes, 1958) or staying in an facility (Souverein, Van der Helm, Stams, 2013).

The importation model: a focus on youth's characteristics

Youth in residential youth care generally have limited ability to react adequately in social problematic situations due to problems in social information processing, which may result in aggression as a problem solving strategy (Arsenio, Adams, & Gold, 2009; Eltink, Van der Helm, Wissink, & Stams, 2015; Nas, Orobio de Castro, & Koops, 2005; Van der Helm et al., 2013a). Youth in residential care constitutes a high-risk group for psychological, psychiatric, educational, social, health, and behavioral problems (e.g., Attar-Schwartz, 2008, 2009; Colins et al., 2010; Colins et al., in press). These youth often have a history of neglect and/or abuse (Van Dam, Nijhoff, Scholte, & Veerman, 2010), while being a victim of abuse is a risk factor for becoming a perpetrator of abuse

later in life (the 'cycle of violence'; Widom 1989), or future adolescent offending (Asscher, Van der Put, & Stams, 2015). Notably, Dodge (2006) showed that past experiences of insecurity, such as long-term exposure to violent environments or frequent placements in residential facilities can lead to heightened vigilance, hostile and distrustful thoughts, which can evoke aggression (Sato, Uono, Matsuura, & Toichi, 2009).

Gender differences in aggression are well established, with boys exhibiting substantially more direct aggression and girls showing slightly more indirect aggression (Bjorkqvist, 2017; Card, Stucky, Sawalani, & Little, 2008). Also in residential youth care, boys have been shown to exhibit more externalizing problems, including aggressive and delinquent behaviors, than girls (e.g., Attar-Schwartz, 2008; Glisson, Hemmelgarn, & Post, 2002; Schiff & Benbenishty, 2006). Aggressive incidents in youth inpatient facilities have particularly been associated with male sex (Barton, Rey, Simpson, & Denshire, 2001). Piquero, Carriaga, Diamond, Kazemian and Farrington (2012) reviewed the literature on the development of aggression, and concluded that the continuity of childhood, adolescent, and adult problem behavior is "one of the few 'knowns' in criminology". Piquero et al. (2012) concluded that aggression is rather stable in childhood and throughout adolescence, in particular in the most aggressive youth and persistent juvenile offenders, but begins to gradually decrease for most persons in early adulthood, which concurs with the results of general populations studies showing that problem behavior, including aggression, declines with age (Bongers, Koot, Van der Ende, &Verhulst, 2003). Although aggressive behavior should be distinguished from delinquent behavior both in etiology and prevalence rates (Bongers, Koot, Van der Ende, & Verhulst, 2003, 2004; Dishion & Patterson, 2006), the age-crime curve (Hirshi & Gottfredson, 1983) suggests a curvilinear relation for aggressive forms of delinquent behavior, with a peak in late adolescence and a decline afterwards (Fagan & Western, 2005).

Baker, Archer and Curtis (2005) found that younger children in residential treatment reported more aggression than older children. This result is consistent with studies of Cunningham and Sorensen (2006, 2007), DeLisi, Berg and Hochstetler (2004), and Vassallo, Edwards and Forrest (2016), who showed that younger age was predictive of aggressive behavior within residential facilities. Also, Eltink et al. (2015) found that younger youth in residential facilities reported more aversive reactions to aggression eliciting situations than did older youth. Tillaart, Eltink, Stams, Van der Helm and Wissink, (2018) found that age was not a predictor of aggressive behavior of youth in residential care. However, Manso, García-Baamonde, Alonso and Barona (2011) showed that younger children found it easier to adjust to residential care than older

children, resulting in more hostility in the latter group. We conclude that most studies in residential youth care show a negative relation between age and aggression.

Finally research showed that there are individual differences between youth in secure, semi-secure and open facilities. Vermaes and Nijhof (2014) found that youth in semi-secure residential youth care had lower self-esteem, impaired emotion regulation and showed more antisocial and aggressive externalizing problems, whereas youth in open youth care showed more internalizing problems. In secure facilities, as compared to semi-secure facilities, aggressive behavior, autism, substance abuse and personality disorders are more common (Smeets, 2014).

The deprivation model: negative aspects of residential youth facilities

Negative influences of residential facilities are thought to result from the effects of staying in a residential facility itself (Dye, 2010; White, Shi, Mun, Hirschfeld, & Loeber, 2010). Sykes (1958) describes deprivation in prisons as the loss of freedom, goods, services, autonomy, security, and frequent contact with family and friends due to the nature of the facility as such. Just as life in prison, residential living of any kind means that the whole personality of a young person is involved in a more or less inescapable social system (Elliot & Thompson, 1991), even so when adolescent males and females are placed in same-gender or mixed-gender groups. In general, boys and girls live in mixed-gender groups, which are thought to have developmental value, for instance, from the perspective of sexual development (Connolly, Craig, Goldberg, & Pepler, 2004). However, girls and boys are often placed in same-gender groups when entering a residential facility, which may be for good reasons if a same-gender group provides more protection and better outcomes, but which still should be considered as a restrictive measure, in particular because there is still not much direct empirical evidence for the positive effects of same-gender placement. Notably, the negative effects of antisocial (aggressive) peer association through deviancy training may even be greater in the more homogenous same-gender groups, in particular boys, than the more heterogeneous mixed-gender groups (Dishion, McCord, & Poulin, 1999; Dishion, Poulin, & Burraston, 2001).

In line with the deprivation model (Goffman, 1961; Sykes, 1958), youth in residential youth care often act out aggressively in response to frustrating conditions within their residential facilities, which may take the form of bullying (Sekol, 2013). Harer and Steffensmeier (1996) found the security level of the facility to have a positive relation with aggressive behavior, although it should be kept in mind that the more aggressive youth tend to be placed in (semi)secure facilities (Vermaes & Nijhof, 2014). Gover et al. (2000) and Harer and Steffensmeier (1996) found that

higher security levels can lead to poor adjustment and aggressive behavior. On the contrary, Camp and Gaes (2005) found no relation between aggressive behavior and type of facility (with varying security levels), whereas Davidson- Arad (2005) found that aggressive behavior was more common in open facilities than in secure juvenile offender facilities. Aggressive behavior during child and adolescent hospitalization has also been related to an increasing length of stay (Dean et al., 2008). Recently, longer stay in residential care was also found to be related to more aggression incidents (Van den Tillaart et al., 2018).

Coercion is thought to be part of the structure and control necessary in a residential environment to prevent chaos (Souverein, Van der Helm, & Stams, 2013), but it can turn into repression due to extreme power imbalance (Souverein et al., 2013; Zimbardo, 2007). Repression in residential youth care has recently been defined as authorities intentionally acting in a way that harms the youth, or authorities unlawfully or arbitrarily depriving the youth of liberty or autonomy (De Valk, Kuiper, Van der Helm, Maas, & Stams, 2016, p. 205), which has been shown to result in antisocial behavior of the youth (Heynen, Van der Helm, Cima, Stams, & Korebrits, 2016; Pritikin, 2009). Staff often responds to such antisocial behavior by intensifying repression (Davidson-Arad, Golan, 2007; Van der Helm, Boekee, Stams & Van der Laan, 2011), which contributes to a loss of the sense of control and autonomy of the youth, provoking new aggressive behavior (Van der Helm, 2011).

Current study

The current short-term longitudinal study examined predictors of self-reported aggression in residential youth care from the perspective of the importation model (individual characteristics of the youth that are thought to be related to aggression) and deprivation model (environmental characteristics that are thought to be related to aggression of the youth). We examined the association between characteristics of the youth and their level of aggression after three months. We hypothesized that age of youth would be negatively associated with later aggression, that boys would report more direct aggression and girls more indirect aggression at T2, and that aggression at T1 would be positively associated with aggression at T2. We focused on the impact of the social environment by examining differences in aggression related to placement in a same-gender group versus mixed-gender group, the degree of restrictiveness of the facility (open/semi-secure and secure), length of stay and repression. We expected a longer stay in the residential facility to be associated with more aggression over time, youth in semi-secure and secure facilities to report more aggression than youth in open facilities at T2, and repression to be positively associated with

aggression at T2. Environmental influences were tested in multiple hierarchical regression analyses by first controlling for individual (import) characteristics of the youth. Finally, we examined whether perceived repression would be differentially related to aggression in the three types of facilities and same-sex and mixed-gender groups, because both levels of repression and aggression may differ between semi-secure, secure and open facilities as well as in same-sex and mixed-gender groups.

Method

Participants

A total of 198 youth participated in our study, with complete data at T1 and T2, three months after T1. It is a sample of convenience of all youth who were available at the time to participate in the study. Of the sample, 49 youth were placed in open youth facilities, 106 in semi-secure youth facilities, and 43 youth were placed in secure youth care (juvenile correctional facilities). From the population (*N* = 198) 130 youth were boys and 68 were girls. The average age of the boys (*n* = 130) was 16.2 years (*SD* = 1.83) and the average age of the girls (*n* = 68) was 15.8 years (*SD* = 1.17).

Procedure

Participants were asked to complete the questionnaires. All respondents participated voluntarily, signed an informed consent declaration, and were assured that their answers would be treated confidentially and processed anonymously, being accessed only by the researchers. All names on the questionnaires were deleted and given a code number in SPSS. To protect the privacy of the respondents, researchers had no access to the names. All interviews and questionnaires were administered by specially trained graduate students of the Leiden University of Applied Sciences (bachelor of social work and master youth care) and the University of Amsterdam (Department of Forensic Child and Youth Care Sciences). The study protocol was approved by the ethical committee of the Leiden University of Applied Sciences. None of the authors have a conflict of interest.

Measures

The perception of repression was measured by means of the repression scale of the Prison Group Climate Instrument (PGCI; Van der Helm, Stams, & Van der Laan, 2011). Repression (seven items) is rated on a 5-point Likert-type scale, ranging from 1 = *I do not agree* to 5 = *I totally agree,* and assesses perceptions of strictness and control, unfair and haphazard rules, and lack of flexibility at

the living group. An example of a repression item is "You have to ask permission for everything here." In the validation study of the PGCI , the factor *repression* proved to be reliable, with internal consistency reliability of α =.76 (Van der Helm, 2011). The present study shows a reliability of α =.80.

Aggression was measured with the Buss Durkee Hostility Inventory - Dutch version (BDHI-D; Lange, Hoogendoorn, Wiederspahn, & De Beurs, 2005). The BDHI-D consists of 40 items (true/false) and three scales: direct aggression, indirect aggression and social desirability. The scale for social desirability has not been consistent nor reliable, and was therefore not used in the present study. Direct aggression items consist of a combination of physical and verbal aggression; anger and hostility are concepts of indirect aggression. An example of a direct aggression item is "If somebody hits me first, I let him have it." An example of an indirect aggression item is "I'm often angry, without other people knowing". The internal consistency reliability in the validation study of De Lange, Hoogendoorn, Wiederspahn, and De Beurs (1995) on the scale for direct aggression was α=.77, and for indirect aggression α=.79. The present study showed a reliability for direct aggression of α=.80 at T1 and α=.77 at T2. For indirect aggression the present study showed a reliability of α=.80 at T1 and α=.82 at T2.

Analyses

We first conducted preliminary univariate analyses, after imputation of missing data through Expectation Maximization (EM), computing simple correlations between all variables of interest, that is, (static) individual characteristics, length of stay, gender group, type of facility, repression and aggression at Time 1 (T1) and Time 2 (T2). Subsequently, we computed intraclass correlations (ICC) by means of a multilevel random intercept-only model (null-model) to examine whether there was significance between residential group variance in both indirect and direct aggression. Because the intraclass correlations were zero, and therefore non-significant, we decided to conduct standard hierarchical multiple regression analyses. The effects of variables that are included on later steps in the model are only meaningful if controlled for the variables entered in previous steps given the theoretical priority of repression above level of security, which is only a static factor. Moreover, testing environmental influences requires that individual characteristics of the youth are controlled for in order to rule out the alternative explanation that the effects of environmental factors on aggression may be explained by individual factors, that is, characteristics of the youth instead of environmental characteristics.

We entered variables in the following eight consecutive steps, starting with youth's individual characteristics (first static, subsequently dynamic), followed by environmental variables: step 1, static youth characteristics (age and gender); step 2, indirect and direct aggression at T1; step 3, length of stay; step 4, gender group (the dummy variables boys-only and girls-only); step 5, type of facility (the dummy variables secure and open facility), step 6, repression at T1; step 7, the interaction between repression and gender group; step 8, the interaction between repression and type of facility.

Results

Preliminary results

It can be derived from Table 1 that most variables were intercorrelated (mostly weak correlations). Girls were underrepresented in secure facilities (r = -.25), and showed less indirect aggression at T1 (r = -.19) and T2 (r = -.15). In boys-only groups and secure facilities youth were older (r = .19 and r = .51, respectively), whereas in semi-secure facilities youth were somewhat younger (r = -.36). Furthermore, age was positively associated with direct and indirect aggression at T1 (r = .15 and r = .18, respectively), and direct and indirect aggression at T2 (r = .15 and r = .17, respectively). Youth in boys-only groups had a shorter stay in secure facilities (r = -.21 and r = -.48) and length of stay was longer in semi-secure facilities (r = .27). In addition, length of stay was negatively associated with both indirect aggression at T1 and T2 (r = -.16). Girls-only groups were overrepresented in semi-secure facilities (r = .22) and underrepresented in secure facilities (r = -.14). Furthermore, lower levels of indirect aggression were reported at T1 and T2 in girls-only groups (r = -.20 and r = -.22, respectively).

Boys-only groups were overrepresented in secure facilities (r = .41), and reported higher levels of indirect aggression at T1 and T2 (r = .21 and r = .16). Youth in semi-secure facilities reported less indirect aggression at T1 and T2 (r = -.18 and -.22, respectively) as well as less direct aggression at T2 (r = -.15), and more repression at T1 (r = .35) than youth in the other facilities. Youth in secure facilities reported more indirect aggression at T1 and T2 (r = .21 and r = .17, respectively) than youth in the other facilities. Direct aggression at T1 was positively correlated with indirect aggression at T1 (r = .43), and direct and indirect aggression at T2 (r = 72, and r = .35, respectively). Furthermore, direct aggression at T1 was negatively associated with repression at T1 (r = -.24). Indirect aggression at T1 was positively correlated with direct and indirect aggression at T2 (r = .34 and r = .73, respectively), and negatively correlated with repression at T1 (r = -.31).

Finally, repression at T1 was negatively correlated with indirect aggression at T2 (r = -.34), while direct and indirect aggression were positively correlated at T2 (r = .42).

Table 1. *Two- tailed Pearson's correlations of all variables*

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender[1]	.34	.48	1											
2. Age	16.05	1.64	-.11	1										
3. Length of Stay[2]	.93	.24	.14	-.07	1									
4. Girls Group	.23	.42	.72***	–.04	.09	1								
5. Boys Group	.49	.50	-.72***	.19**	–.21**	–.54***	1							
6. Semi secure	.53	.50	.08	–.36***	.27***	.22**	–.09	1						
7. Secure	.22	.41	-.25***	.51***	-.48**	-.14*	.41***	-.57***	1					
8. Direct aggr T1	1.76	.41	-.07	.15*	.02	-.02	.06	-.08	.00	1				
9. Indirect aggr T1	2.09	.42	-.19**	.18*	-.16*	-.20**	.21**	-.18*	.21**	.43***	1			
10. Repression	3.36	.86	-.08	-.05	.10	.08	.12	.35***	.01	-.24**	-.31***	1		
11. Direct aggr T2	.174	.39	-.06	.15*	-.09	-.01	.07	-.15*	.08	.72***	.34***	-.13	1	
12. Indirect aggr T2	2.08	.42	-.15*	.17*	-.16*	-.22**	.16*	-.22**	.17*	.35***	.73***	-.34***	.42***	1

Note: *p < .05 **p < .01 ***p<.001

Note: [1] Gender participant (0=boy, 1= girl)

[2] Length of Stay (0= short, 1= long)

Multiple hierarchical regression analysis

Two hierarchical multiple regressions were used to predict indirect and direct aggression from youth's and environmental characteristics, respectively. The entry order of the variables permits an examination as to whether the variables of interest account for any additional variance in the criterion variable that is not explained by previously entered predictors.

Table 2 shows the results of the hierarchical multiple regression analysis for direct aggression at T2. The regression equation was significant, F (14, 183) = 15.55, p < .001, the predictors explained 54% of the variance in direct aggression at T2. Age of the youth (β = .15) and direct aggression at T1 (β = .70) were both positively associated with direct aggression at T2, whereas length of stay (β = - .10) was negatively associated with direct aggression at T2. Finally, repression (β = .10) just failed to reach significance, showing a trend indicating that higher levels of repression at T1 predicted more direct aggression at T2.

Table 2. *Multiple hierarchical regression analysis: direct aggression*

Predictors	*R*	R^2	ΔR^2	*ΔF*	*ß*	*t*
Static individual characteristics	.16	.03	.03	2.46+		
Sex of the adolescent					-.04	-0.57
Age of the adolescent					.15	2.07*
Aggression at time 1	.72	.52	.49	99.38***		
Direct aggression					.70	12.63***
Indirect aggression					.03	0.55
Short versus long stay	.73	.53	.01	3.92*	-.10	-1.98*
Gender group	.73	.53	.00	0.08		
Girls-only					.01	0.18
Boys-only					.03	0.35
Type of facility	.73	.53	.00	0.85		
Secure					-.03	-0.41
Semi-Secure					-.09	-1.28
Repression at time 1	.74	.54	.01	2.96+	.10	1.72+
Interaction: repression * gender group	.74	.54	.00	0.38		
Boys-only groups * repression					-.02	-0.22
Girls-only groups* repression					-.06	-0.84
Interaction: repression * type of facility	.74	.54	.00	0.11		
Secure * repression					.03	0.40
Semi-secure * repression					.04	0.40

Note 1. $N = 198$

Note 2. + $p < .10$ * $p < .05$; ** $p < .01$; *** $p < .001$

Note 3: $F(14, 183) = 15.55$, $p < .001$

Table 3 shows the results of the multiple hierarchical regression analysis for indirect aggression at T2. The regression equation was significant, $F(14, 183) = 15.55$, $p < .001$): the predictors explained 56% of the variance in indirect aggression at T2. Age of the adolescent ($\beta = .16$) and indirect aggression at T1 ($\beta = .71$) were both positively associated with indirect aggression at T2, whereas gender composition of the groups ($\beta = - .16$) was negatively associated with indirect aggression at T2, indicating that girls-only groups showed less indirect aggression. Finally, sex of the adolescent ($\beta =- .13$) showed a trend indicating that girls experienced less indirect aggression at T2.

Table 3. *Multiple hierarchical regression analysis: indirect aggression*

Predictors	*R*	R^2	ΔR^2	ΔF	*ß*	*t*
Static individual characteristics	.22	.05	.05	4.74*		
Sex of the adolescent					-.13	-1.83+
Age of the adolescent					.16	2.26*
Aggression at time 1	.74	.54	.49	103.94***		
Direct aggression					.04	0.77
Indirect aggression					.71	12.82***
Short versus long stay	.74	.54	.00	0.78	-.04	-0.89
Gender group	.75	.56	.02	2.59+		
Girls-only					-.16	-2.27*
Boys-only					-.01	-0.19
Type of facility	.75	.56	.00	0.79		
Secure					-.07	-1.21
Semi-Secure					-.08	-1.28
Repression at time 1	.75	.56	.00	2.51	-.09	-1.58
Interaction: repression * gender group	.75	.56	.00	0.48		
Boys-only groups * repression					.05	0.68
Girls-only groups* repression					-.02	-0.30
Interaction: repression * type of facility	.75	.56	.00	0.38		
Secure * repression					- .06	- 0.88
Semi-secure * repression					- .04	- 0.44

Note 1. $N = 198$

Note 2. + $p < .10$ * $p < .05$; ** $p < .01$; *** $p < .001$

Note 3: $F(14,183) = 15.55$, $p < .001$

Discussion

The present short-term longitudinal study focused on the explanation of youth self-reported aggression in residential youth care from the perspective of the importation and deprivation model, focusing on characteristics of the youth, such as initial levels of aggression, and features of the facility, including the level of security (open, semi-secure or secure institution) and repression by staff as perceived by the youth. Based on self-report data, we found support for the stability of aggressive behavior across a relatively short time period. Results provided very limited support for

environmental influences, because multilevel analyses did not show significant context variance (i.e., between living group differences in aggression at T2), while perceived repression at T1 and length of stay (not in the expected direction) only showed a weak trend-like association with direct aggression at T2, with negligible effects. Gender composition of the living group did have a small environmental effect, which indicated that girls-only groups showed less indirect aggression at T2 compared to boys-only and mixed gender groups, even after controlling for gender (at the individual level) and initial levels of aggression. No significant effects were found for type of facility. Finally, older youth reported more direct and indirect aggression at T2, and there was a trend showing that girls reported less indirect aggression at T2.

Previous research on residential group climate and aggression in Dutch youth prisons and in a secure forensic psychiatric units for youth in Belgium showed that repression was unrelated to aggression (De Decker, Lemmens, Van der Helm, Bruckers, Molenberghs & Tremmery, 2017; Ros, Van der Helm, Wissink, Stams, & Schaftenaar, 2013; Van der Helm et al., 2011), which is in line with results of the present study. It has been suggested that the repression youth in residential youth care perceive does not differ much from the repression they may have experienced prior to their residential placement in adverse child-rearing situations, which may therefore hardly increase aggression during their stay in a highly restrictive residential environment (Anderson, 2000; Bugental, 2009; De Jong, 2007; Osgood & O'Neill Briddell, 2006; Sato et al., 2009; Van Spinhoven et al., 2010).

Unlike findings in the Netherlands, Heynen et al. (2016) found perception of repression to be associated with higher levels of reactive (but not proactive) aggression in detained juvenile offenders in Germany, which is consistent with the deprivation hypothesis. They suggested that the relation between residential group climate and aggression might be affected by differences in the juvenile prison system between Germany and the Netherlands; the German juvenile prison system particularly focuses on formal education, reduction of drug use and aggression (Walter, 1999), but does not target reduction of aggressive behavior by means of evidence-based offender rehabilitation programs, such as Responsive Aggression Regulation Therapy (Hoogsteder et al., 2014). Also, the repression scale of the PGCI consists of items measuring both repression and deprivation. Deprivation items loaded relatively high on the German version of the PGCI, whereas repression items loaded relatively high on the Dutch version of the PGCI (Heynen, Van der Helm, Stams, & Korebrits, 2014; Van der Helm et al., 2011). Therefore, Heynen et al. (2016) argued that deprivation rather than repression may explain the German results.

Length of stay showed a trend-like negative association with indirect aggression, which indicated that youth staying longer in residential care reported slightly less indirect aggression at T2. This is in line with findings of a study by Cunningham and Sorensen (2007) in Florida (USA), showing that a longer stay in juvenile prison was associated with lower rates of aggressive behavior, but inconsistent with recent research in the Netherlands by Van den Tillaart et al. (2018), who showed that length of stay in both open and secure residential facilities was positively associated with involvement of youth in aggressive incidents. However, in the present study we assessed the predisposition to exhibit aggressive behavior by means of youth self-report instead of aggressive incidents during detention through incident registrations. It is plausible to suggest that self-perceived indirect aggression decreases with time spent in the facility, because social positioning to acquire social status (which elicits relational aggression) may decrease when relationships among youth at the living group progressively stabilize (Archer & Coyne, 2005).

The present study found no evidence that youth in semi-secure and secure facilities showed higher levels of aggression after a three-month period than youth placed in open facilities after controlling for characteristics of the youth, including initial levels of aggression. This finding is in line with results from the study by Van den Tillaart et al. (2018), who also did not find differences in aggression between open, semi-secure and secure facilities in The Netherlands. Notably Davidson-Arad (2005) compared three types of juvenile correctional facilities in Israel, and found that direct aggression (i.e., violent misconduct) was more frequent in the more open facilities compared to closed facilities. More direct aggression in the open facilities was explained by reduced supervision, while youth in these open facilities still were thought to have insufficient coping strategies to manage their anger and frustration. However, David-Arad's study was cross-sectional and did not control for initial levels of direct aggression. In the present study, we also found lower levels of both indirect and direct aggression in semi-secure facilities in the univariate analyses, but these differences disappeared after taking individual characteristics of the youth into account. For instance, aggression at T1 (as an individual characteristic) was strongly associated with aggression at T2, which is consistent with studies showing that aggression is rather stable in high risk youth, and is often more induced by individual (including genetic) than environmental factors (Fairchild, Van Goozen, Calder, & Goodyer, 2013; Niv, Tuvblad, Raine, & Baker, 2013; Moffitt,1993; Tremblay, 2003, 2010).

To conclude, it seems that perceived repression by youth in residential youth care does not, or hardly, affect their aggressive behavior. However, De Swart et al. (2012) showed in their meta-analysis that residential youth care might reduce aggressive behavior of youth if they receive

evidence-based treatment, mostly Cognitive Behavior Therapy (CBT), targeting aggressive and delinquent behavior (see Andrews & Bonta, 2010). For instance, Hoogsteder et al. (2014) showed that Responsive Aggression Regulation Therapy (Re-Art) proved to be effective in reducing aggression in youth placed in a Dutch youth prison and even reducing recidivism (Hoogsteder, Stams, Schippers, & Bonnes, 2016). If repression generally does not have a direct effect on aggression (as a predictor), future studies should in particular examine if, and to what extent, repression might have a negative effect on the effectiveness of treatment targeting aggression (as a moderator). To date, no such studies have been conducted.

The present study found a positive relation between age of the youth and aggression, both at T1 and T2, which is not consistent with our expectation, given that most studies found a negative association between age and aggression in residential youth care. It should be noted that the association between age and antisocial behavior (i.e., aggression and delinquent behaviors) tends to be rather complex, and may vary across outcome and population (Fagan & Western, 2005). Youth in open, semi-secure and secure residential youth care facilities represent a high risk group with troubled backgrounds and high levels of psychopathology (e.g., Colins et al., 2010; Nijhoff, 2011; Trout et al., 2008). It is not unlikely that antisocial behavior in this highly disturbed group of youth peaks in late adolescence instead of early or middle adolescence, and starts to decline after late adolescence or even young adulthood (Loeber et al., 2012), which may explain the positive association between age and aggressive behavior in the present study.

Although in general girls tend to show lower levels of direct aggression than boys (Card et al., 2008; Ostrov & Godleski, 2010), highly disturbed girls entering juvenile justice facilities in The Netherlands have been found to show similar levels of psychopathology, including aggression (Hamerlynck, 2008; Nijhoff, 2011). Notably, girls are less often detained compared to boys, but these girls' problems tend to be more severe than those of boys ('Gender Paradox'; Zahn, Day, Mihalic & Tichavsky, 2009). In line with the study by Hamerlynck and other studies highlighting serious behavior problems in (justice-involved) girls in residential youth care (Van Vugt, Lanctôt, Paquette, Collin-Vezina, & Lemieus, 2014), we did not find differences in direct aggression between boys and girls in the present study. However, there was a trend indicating that girls rated somewhat lower on self-reported indirect aggression, which concurs with results from the meta-analysis of Card et al. (2008), who also found that girls did score lower on self-reported indirect aggression compared to boys, although overall (independent of assessment method) girls showed slightly more indirect aggression than did boys. We therefore should be cautious in the interpretation of our study results, in particular because in a review on the effects of complex

trauma, Ford, Chapman, Connor and Cruise (2012) found relational aggression to be a (maladaptive) coping strategy of girls in secure residential facilities, in particular in those with a history of sexual abuse (Cullerton-Sen et al., 2008).

Additionally, we found less indirect aggression in girls-only groups than in mixed gender or boys-only groups, even when controlled for individual gender differences in aggression at T2, and initial levels of aggression. First, because girls have been found to display a stronger relational orientation than boys (Taylor, Klein, Lewis, Gruenewald, & Gurung, 2000; Zahn-Waxler, Shirtcliff & Woods, 2005), and as they tend to particularly emphasize the importance of harmonious peer relationships in residential youth care (Matthys, Lanctôt, & Touchette, 2013), they might derive more support from their relationships with other girls in same-gender living groups, reducing levels of indirect (i.e., relational) aggression. Moreover, they might find it easier to discuss gender-specific recovery issues in same-gender groups. Second, staff may find it less difficult to establish a positive working alliance with girls in same-gender groups than in mixed gender groups, thus creating a more supportive group environment for these girls in same-gender groups. This adds to the findings of Lanctôt, Ayotte, Turcotte and Besnard (2012), who showed that staff in semi-secure care found it more difficult to work with girls than boys and building a good working alliance with them.

The present study has some limitations. First, the BDHI-D was used to assess aggression because the instrument showed no underreporting of aggression in a group of serious juvenile delinquents in the Netherlands (Breuk, Clauser, Stams, Slot, & Doreleijers, 2007), but the BDHI-D has two drawbacks. The dichotomous 'true' or 'false' items may lead to lack of variance, and most items of the BDHI-D assess rather static (trait-like) tendencies to show aggressive behavior instead of a more dynamic (state-like) assessment of aggression, which limits possibilities to find significant changes in aggression over time. A second limitation is that the environmental variance might be somewhat circumscribed in the way it is measured (mostly dummy variables) - and perhaps also in reality – if the residential facilities do not show much differences, for instance, if they are mostly well-functioning. A third limitation is that a time span of three months between the measurements may be too short to find substantial environmental effects on the development of aggression in residential youth care. However, it should be kept in mind that the majority of youth placed in custody in a juvenile correctional facility spend no longer than three months in a residential facility and even such a short period of time in a residential facility might be experienced as a major life event for most youth (Van der Helm, 2011).

A fourth limitation is that both repression and aggression were assessed by using youth self-report instruments only, which was not supplemented with independent objective observations or assessment of the perspective of staff. Finally, there are more aspects of youth's individual functioning that may influence aggression, such as empathy, cognitive distortions, moral judgment and self-conscious emotions (Orobio de Castro et al., 2002; Spruit, Schalkwijk, Van Vugt, & Stams, 2016; Stams et al., 2006; Van der Helm et al., 2013; Van Langen, Wissink, Van Vugt, Van der Stouwe, & Stams, 2014), which were not addressed in this article because we did not have access to this information. Also, in further research more environmental variables should be assessed in order to be able to fully account for the effects of environmental factors.

Despite the limitations of this study, this is one of the few (short-term longitudinal) studies examining the development of aggression in youth in residential youth care in the Netherlands from the perspective of the importation and deprivation model. The worrisome stability of aggression asks for effective evidence-based treatment. Both Strijbosch et al. (2015) and De Swart et al. (2012) conducted a meta-analysis showing that residential youth care might reduce psychopathology, including aggressive behavior if youth receive evidence-based treatment, that is, 'structured and often manualized interventions based on empirically supported theories about what causes and maintains problems, which have been proven to be effective (to some degree) in (quasi-) experimental research' (Strijbosch et al., 2015, page 215). However, it is plausible to suggest that evidence-based treatment during residential care is not sufficient to establish positive outcomes that generalize over context and time for youth with a history of adverse care and multiple risks (Lane, Turner, Fain, & Sehgal, 2005). Most of them may need aftercare (James, Stams, Asscher, Van der Laan, & De Roo, 2013). Future studies should examine if, and to what extent, residential group climate – including the group atmosphere among youth, opportunities for growth, support from staff and repression – could have a moderating effect on evidence-based treatment targeting aggression of youth in residential facilities.

References

Allen, J.J., Anderson, C.A., Bushman, B.J. (2017). The general aggression model. *Current Opinion in Psychology, 19*, 75-80.

Anderson, E. (2000). *Code of the street: Decency, violence, and the moral life of the inner city*. WW Norton & Company.

Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct*. Routledge.

Archer, J., & Coyne, S. M. (2005). An integrated review of indirect, relational, and social aggression. *Personality and Social Psychology Review*, *9*(3), 212-230.

Arsenio, W. F., Adams, E., & Gold, J. (2009). Social information processing, moral reasoning, and emotion attributions: Relations with adolescents' reactive and proactive aggression. *Child development, 80*(6), 1739-1755.

Asscher, J.J., Van der Put, C. E. & Stams, G.J.J.M. (2015). Gender differences in the association between child maltreatment and adolescent offending. *Journal of Family Violence, 30, 215-225*.

Attar-Schwartz, S. (2008). Emotional, behavioral and social problems among Israeli children in residential care: A multi-level analysis. *Children and Youth Services Review*, *30*, 229-248.

Attar-Schwartz, S. (2009). School functioning of children in residential care: The contributions of multilevel correlates. *Child abuse & neglect, 33*(7), 429-440.

Baeza, I., Correll, C. U., Saito, E., Amanbekova, D., Ramani, M., Kapoor, S., & Carbon, M. (2013). Frequency, characteristics and management of adolescent inpatient aggression. *Journal of child and adolescent psychopharmacology*, *23*(4), 271-281.

Baker, A. J., Archer, M., & Curtis, P. A. (2005). Age and gender differences in emotional and behavioural problems during the transition to residential treatment: The Odyssey Project. *International Journal of Social Welfare, 14*(3), 184-194.

Baron, R. A., & Richardson, D. R. (2004). *Human aggression*. New York, United States of America: Springer Science & Business Media.

Barter, C., Renold, E., Berridge, D., & Cawson, P. (2004). *Peer violence in children's residential care*. New York Palgrave.

Barth, R. P. (2002). *Institutions vs. foster homes: The empirical base for a century of action.* Chapel Hill, NC: UNC, School of Social Work, Jordan Institute for Families.

Barzman, D.H., Brackenbury, L., Sonnier, L., Schnell, B., Cassedy, A., Salisbury, S., Sorter, M., Mossman, D. (2011). Brief Rating of Aggression by Children and Adolescents (BRACHA):

Development of a tool for assessing risk of inpatients' aggressive behavior. *Journal of American Academic Psychiatry & Law, 39*, 170–179.

Bastiaanssen, I. L. W., Kroes, G., Nijhof, K., Delsing, M. J. M. H., Engels, R. C. M. E., & Veerman, J. W. (2012). Measuring group care worker interventions in residential youth care. *Child & Youth Care Forum, 41*, 447–460. http://dx.doi.org/10.1007/s10566-012-9176-8

Bjorkqvist, K. (2017) Gender differences in aggression. *Current Opinion in Psychology, 19*, 39-42.

Bongers, I. L., Koot, H. M., Van der Ende, J., & Verhulst, F. C. (2003). The normative development of child and adolescent problem behavior. *Journal of abnormal psychology, 112*(2), 179.

Bongers, I. L., Koot, H. M., van der Ende, J., & Verhulst, F. C. (2004). Developmental trajectories of externalizing behaviors in childhood and adolescence. *Child Development, 75,* 1523–1537.

Boone, M., Althoff, M., & Koenraadt, F. (2015). *Het leefklimaat in justitiële inrichtingen [The living environment in correctional institutions].* WODC [Research and Documentation Centre], 2016.

Bowers, L., Stewart, D., Papadopoulos, C., Dack, C., Ross, J., Khanom, H., Jeffrey, D. Inpatient violence and aggression: A literature review. *Section of Mental Health Nursing Health Service and Population Research Institute of Psychiatry Kings College London*, 2011.

Bushman, B. J., & Anderson, C. A. (2001). Is it time to pull the plug on hostile versus instrumental aggression dichotomy? *Psychological review, 108*, 273-279. https://doi.org/10.1037//0033-295X.108.273

Breuk, R. D., Clauser, C. A. C., Stams, G. J. J. M., Slot, N. W., & Doreleijers, T. A. H. (2007). The validity of questionnaire self-report of psychopathology and parent–child relationship quality in juvenile delinquents with psychiatric disorders. *Journal of adolescence, 30*, 761-771. https://doi.org/10.1016/j.adolescence.2006.10.003

Camp, S. D., & Gaes, G. G. (2005). Criminogenic effects of the prison environment on inmate behavior: Some experimental evidence. *Crime & Delinquency, 51*(3), 425-442.

Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child development, 79*(5), 1185-1229.

Colins, O., Boonman, C., Veenstra, J., van Domburgh, L., Buffing, F., Doreleijers, T., Vermeiren, R. (in press). Mental health problems and recidivism among detained male adolescents from various ethnic origins. *European Child & Adolescent Psychiatry*.

Colins, O., Vermeiren, R., Vreugdenhil, C., Van den Brink, W., Doreleijers, T., Broekaert, E. (2010). Psychiatric disorders in detained male adolescents: a systematic literature review. *Canadian Journal of Psychiatry 55(4)*:255-63.

Colins, O., Vermeiren, R. R. J. M., Vahl, P., Markus, M., Broekaert, E., & Doreleijers, T. (2012). Parent-reported attention-deficit hyperactivity disorder and subtypes of conduct disorder as risk factor of recidivism in detained male adolescents. *European Psychiatry*, *27*(5), 329-334.

Connolly, J., Craig, W., Goldberg, A., & Pepler, D. (2004). Mixed-gender groups, dating, and romantic relationships in early adolescence. *Journal of Research on Adolescence*, *14*(2), 185-207.

Cornaggia, C.M., Beghi, M., Pavone, F., Barale, F. (2011). Aggression in psychiatry wards: A systematic review. *Psychiatry Res 189*:10–20.

Cullerton-Sen, C., Cassidy, A. R., Murray-Close, D., Cicchetti, D., Crick, N. R., & Rogosch, F. A. (2008). Childhood Maltreatment and the Development of Relational and Physical Aggression: The Importance of a Gender-Informed Approach. *Child development*, *79*(6), 1736-1751.

Cunningham, M. D., & Sorensen, J. R. (2006). Actuarial models for assessing prison violence risk revisions and extensions of the Risk Assessment Scale for Prison (RASP). *Assessment*, *13*(3), 253-265.

Cunningham, M.D., and Sorensen, J.R. (2007). Predictive Factors for Violent Misconduct in Close Custody. *The Prison Journal 87* (2), 241-253

Davidson-Arad, B. (2005). Observed violence, abuse, and risk behaviors in juvenile correctional facilities: Comparison of inmate and staff reports. *Children and Youth Services Review, 27*(5), 547-559.

Davidson-Arad, B., & Golan, M. (2007). Victimization of juveniles in out-of-home placement: Juvenile correctional facilities. *British Journal of Social Work*, *37*(6), 1007-1025.

Dean, A. J., Duke, S. G., Scott, J., Bor, W., George, M., & McDermott, B. M. (2008). Physical aggression during admission to a child and adolescent inpatient unit: predictors and impact on clinical outcomes. *Australian and New Zealand journal of psychiatry, 42*(6), 536-543.

De Decker, A., Lemmens, L., Van der Helm, P., Bruckers, L., Tremmery, S. (2017). The Relation Between Aggression and the Living Group Climate in a Forensic Treatment Unit for Adolescents; a pilot study. *International Journal of Offender Therapy and Comparative Criminology, 1-17.*

De Jong, J. D. (2007). Kapot moeilijk. *Een Etnografisch Onderzoek naar Opvallend Delinquent Gedrag van 'Marokkaanse'Jongens. Amsterdam*.

DeLisi, M., Berg, M. T., & Hochstetler, A. (2004). Gang members, career criminals and prison violence: Further specification of the importation model of inmate behavior. *Criminal Justice Studies*, *17*(4), 369-383.

DeLisi, M., Drury, A.J., Kosloski, A.E., Caudill, J.W., Conis, P. J., Anderson, C.A., Vaughn M. G., & Beaver K.M.. (2010). The cycle of violence behind bars: Traumatization and institutional misconduct among juvenile delinquents in confinement*. Youth Violence and Juvenile Justice, 8,* 107-121. https://doi.org/10.1177/1541204009349399

DeLisi, M., Trulson, C. R., Marquart, J. W., Drury, A. J., & Kosloski, A. E. (2011). Inside the prison black box: Toward a life course importation model of inmate behavior. *International journal of offender therapy and comparative criminology, 55*, 1186-1207. https://doi.org/10.1177/0306624X11383956

De Swart, J. J. W., Van den Broek, H., Stams, G. J. J. M., Asscher, J. J., Van der Laan, P. H., Holsbrink-Engels, G. A., & Van der Helm, G. H. P. (2012). The effectiveness of institutional youth care over the past three decades: A meta-analysis. *Children and Youth Services Review*, *34*(9), 1818-1824.

De Valk, S., Kuiper, C., van der Helm, G. H. P., Maas, A. J. J. A., & Stams, G. J. J. M. Repression in Residential Youth Care: A Scoping Review. *Adolescent Research Review*, 1-22.

Dishion, T. J., McCord, J., & Poulin, F. (1999). When interventions harm: Peer groups and problem behavior. *American Psychologist, 54*, 755-764.

Dishion, T. J., & Patterson, G. R. (2006). The development and ecology of antisocial behavior in children and adolescents. In D. Cicchetti & D. J. Cohen (Eds.), Developmental psychopathology (Risk, disorder, and adaptation, Vol. 3, pp. 503–541). Hoboken: John Wiley & Sons, Inc.

Dishion, T. J., Poulin, F., & Burraston, B. (2001). Peer group dynamics associated with iatrogenic effects in group interventions with high-risk young adolescents. *New Directions for Child and Adolescent Development, 91*, 79-92.

Dodge, K.A. (2006). Translational science in action: Hostile attributional style and the development of aggressive behavior problems. *Development And Psychopathology, 18*(3), 791–814. Cambridge: University Press.

Dodge, K. A., & Pettit, G. S. (2003). A biopsychosocial model of the development of chronic conduct problems in adolescence. *Developmental psychology, 39*(2), 349.

Dye, M. H. (2010). Deprivation, importation, and prison suicide: Combined effects of institutional conditions and inmate composition. *Journal of Criminal Justice, 38*(4), 796-806.

Elliot, N., & Thompson, D. (1991). Limiting bullying in residential care. *Practical approaches to bullying. London: David Fulton*, 125-129.

Eltink, E. M.A, van der Helm, P., Wissink, I. B., & Stams, G. J. J. M. (2015). The Relation between Living Group Climate and Reactions to Social Problem Situations in Detained Adolescents: "I Stabbed Him Because He Looked Mean at Me". *International Journal of Forensic Mental Health, 14*(2), 101-109.

Fagan, J. A. (1990). Treatment and reintegration of violent juvenile offenders: Experimental results. *Justice Quarterly*, *7*, 233-263.

Fagan, A. A., & Western, J. (2005). Escalation and deceleration of early offending behaviors from adolescence to early adulthood. *Australian and New Zealand Journal of Criminology*, 38, 59-76.

Fairchild, G., Goozen, S. H., Calder, A. J., & Goodyer, I. M. (2013). Research review: evaluating and reformulating the developmental taxonomic theory of antisocial behaviour. *Journal of Child Psychology and Psychiatry*, *54*(9), 924-940.

Ford, J. D., Chapman, J., Connor, D. F., & Cruise, K. R. (2012). Complex trauma and aggression in secure juvenile justice settings. *Criminal Justice and Behavior*, *39*(6), 694-724.

Frensch, K. M., & Cameron, G. (2002). Treatment of choice or last resort? A review of residential mental health placement for children and youth. *Child & Youth Care Forum, 31,* 307–339. http://dx.doi.org/10.1023/A:1016826627406

Glisson, C., Hemmelgarn, A. L., & Post, J. A. (2002). The shortform assessment for children: An assessment and outcome measure for child welfare and juvenile justice. *Research on Social Work Practice*, *12*, 82-106.

Goffman, E. (1961). On the characteristics of total institutions. In *Symposium on preventive and social psychiatry* (pp. 43-84).

Goodstein, L., & Sontheimer, H. (1997). The implementation of an intensive aftercare program for serious juvenile offenders. *Criminal Justice and Behavior*, *24*, 591-611.

Hamerlynck, S. M., Doreleijers, T. A., Vermeiren, R., Jansen, L. M., & Cohen-Kettenis, P. T. (2008). Aggression and psychopathology in detained adolescent females. *Psychiatry research*, *159*(1), 77-85.

Harder, A. T. (2011). The downside up? A study of factors associated with a successful course of treatment for adolescents in secure residential care. Groningen: Rijksuniversiteit Groningen (Dissertation).

Harder, A. T., Knorth, E. J., & Kalverboer, M. E. (2012). Securing the Downside Up: Client and Care Factors Associated with Outcomes of Secure Residential Youth Care. *Child & Youth Care Forum, 41*(3), 259-276. https://doi.org/10.1007/s10566-011-9159-1

Harer, M. D., & Steffensmeier, D. J. (1996). Race and Prison Violence. *Criminology, 34*, 323-355. https://doi.org/10.1111/j.1745-9125.1996.tb01210.x

Helmond, P., Overbeek, G., & Brugman, D. (2012). Program integrity and effectiveness of a cognitive behavioral intervention for incarcerated youth on cognitive distortions, social skills, and moral development. *Children and Youth Services Review*, *34*(9), 1720-1728.

Heynen, E., van Der Helm, P., Cima, M., Stams, G., & Korebrits, A. (2017). The Relation Between Living Group Climate, Aggression, and Callous-Unemotional Traits in Delinquent Boys in Detention. *International Journal of Offender Therapy and Comparative Criminology*, *61*(15), 1701–1718. https://doi.org/10.1177/0306624X16630543

Heynen, E. J. E., Van der Helm, G. H. P., Stams, G. J. J. M., & Korebrits, A. M. (2014). Measuring Group Climate in a German Youth Prison: A German Validation of the Prison Group Climate Instrument. *Journal of Forensic Psychology Practice*, *14*(1), 45-54.

Hirschi, T., & Gottfredson, M. (1983). Age and the explanation of crime. *American journal of sociology,* 552-584.

Hoogsteder, L. M., Kuijpers, N., Stams, G. J. J., E. van Horn, J., Hendriks, J., & Wissink, I. B. (2014). Study on the effectiveness of responsive aggression regulation therapy (Re-ART). *International Journal of Forensic Mental Health*, *13*(1), 25-35.

Hoogsteder, L.M, Stams, G.J.J.M, Schippers, E.E., & Bonnes, D. (submitted for publication). Responsive Aggression Regulation Therapy (Re-ART): An evaluation study in a Dutch juvenile justice institution in terms of recidivism, Manuscript submitted for publication.

Huesmann, L. R., Dubow, E. F., & Boxer, P. (2009). Continuity of aggression from childhood to early adulthood as a predictor of life outcomes: Implications for the adolescent-limited and life-course-persistent models. *Aggressive behavior, 35*(2), 136-149.

Ireland, J. L. (2002). *Bullying among prisoners: evidence, research and intervention strategies. Hove*: Brunner-Routledge.

James, C., Stams, G. J. J. M., Asscher, J. J., De Roo, A. K., & Van der Laan, P. H. (2013). Aftercare programs for reducing recidivism among juvenile and young adult offenders: A

meta-analytic review. *Clinical Psychology Review*, 33, 263-274.

Jiang, S., & Fisher-Giorlando, M. (2002). Inmate misconduct: A test of the deprivation, importation, and situational models. *The Prison Journal, 82*, 335-358. https://doi.org/10.1177/0032885502082003003

Khoury-Kassabri, M., & Attar-Schwartz, S. (2014). Adolescents' Reports of Physical Violence by Peers in Residential Care Settings: An Ecological Examination. *Journal of Interpersonal Violence*, *29*(4), 659–682. https://doi.org/10.1177/0886260513505208

Kuanling, Sorensen & Cunningham (2008). 'Juvenile inmates in an adult prison system: Rates of disciplinary misconduct and violence', *Criminal Justice and Behavior, 35*, 1186-1201. https://doi.org/10.1177/0093854808322744

Lanctôt, N., Ayotte, M. H., Turcotte, M., & Besnard, T. (2012). Youth care workers' views on the challenges of working with girls: An analysis of the mediating influence of practitioner gender and prior experience with girls. *Children and Youth Services Review*, *34*(11), 2240-2246.

Lane, J., Turner, S., Fain, T., & Sehgal, A. (2005). Evaluating an Experimental Intensive Juvenile Probation Program: Supervision and official outcomes. Crime & Delinquency, 51, 26-52.

Lange, A., Hoogendoorn, M., Wiederspahn, A., & Beurs, E. D. (1995). B*DHI-Dutch: Buss-Durkee Hostility Inventory; Handleiding, verantwoording en normering van de Nederlandse Buss-Durkee Agressie Vragenlijst (Manual and Norms of the Dutch Adaptation of the Buss-Durkee Hostility Inventory).*

Lange, A., Hoogendoorn, M., Wiederspahn, A. & Beurs, E., de (2005). *Buss-Durkee Hostility Inventory - Dutch, BDHI-D. Handleiding, verantwoording en normering van de Nederlandse Buss-Durkee-agressievragenlijst [Buss-Durkee Hostility Inventory - Dutch, BDHI-D. Instruction manual, justification, standardization of the Dutch Buss-Durkee-aggression Inventory].* Houten, The Netherlands: Bohn Stafleu Van Loghum.

Loeber, R., Menting, B., Lynam, D. R., Moffitt, T. E., Stouthamer-Loeber, M., Stallings, R., & Pardini, D. (2012). Findings from the Pittsburgh Youth Study: Cognitive impulsivity and intelligence as predictors of the age–crime curve. *Journal of the American Academy of Child & Adolescent Psychiatry*, *51*(11), 1136-1149.

Manso, J. M. M., García-Baamonde, M. E., Alonso, M. B., & Barona, E. G. (2011). An analysis of how children adapt to residential care. *Children and Youth Services Review*, *33*(10), 1981-1988.

Marshall, W. L., & Burton, D. L. (2010). The importance of group processes in offender treatment. *Aggression and Violent Behavior, 15*(2), 141-149.

Matthys, C. L. Lanctôt, N. ; Touchette, L. (2013). Validation d'une mesure de climat de groupe chez des adolescentes en centre de réadaptation: le vécu éducatif partagé au travers de trois dimensions essentielles. *Revue Européenne de Psychologie Appliquée, Vol. 63, Issue 2*, 109-119

Mendes**,** D.D.**,** Mari, J. J., Singer**,** M., Barros**,** G. M., & Mello**,** A. F**. (**2009**).** Study review of the biological**,** social and environmental factors associated with aggressive behavior. *Brazilian Journal of Psychology, 31, 7*7-85.

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy. *Psychological review*, *100*(4), 674.

Nas, C. N., Orobio De Castro, B., & Koops, W. (2005). Social information processing in delinquent adolescents. *Psychology, Crime & Law, 11*(4), 363-375.

Nijhof, K. S. (2011). *Crossing barriers: Evaluation of a new compulsory residential treatment program for youth*. [Sl: sn].

Niv, S., Tuvblad, C., Raine, A., & Baker, L. A. (2013). Aggression and rule-breaking: Heritability and stability of antisocial behavior problems in childhood and adolescence. *Journal of criminal justice*, *41*(5), 285-291.

Orobio de Castro, B., Veerman, J. W., Koops, W., Bosch, J. D., & Monshouwer, H. J. (2002). Hostile attribution of intent and aggressive behavior: A meta-analysis. *Child development*, *73*(3), 916-934.

Osgood, D. W., & Briddell, L. O. N. (2006). Deviant peer influences in programs for youth: Problems and solutions.

Piquero, A. R., Carriaga, M. L., Diamond, B., Kazemian, L., & Farrington, D. P. (2012). Stability in aggression revisited. *Aggression and Violent Behavior, 17*, 365-372.

Pritikin, M. H. (2009). Is prison increasing crime? *Wisconsin Law Review, 2*, 1049–1108.

Ros, N., Van der Helm, P., Wissink, I., Stams, G. J., & Schaftenaar, P. (2013). Institutional climate and aggression in a secure psychiatric setting. *The Journal of Forensic Psychiatry & Psychology*, *24*(6), 713-727.

Sato, W., Uono, S., Matsuura, N., & Toichi, M. (2009). Misrecognition of facial expressions in delinquents. *Child and Adolescent Psychiatry and Mental Health*, *3*(1), 1.

Schiff, M., & Benbenishty, R. (2006). Functioning of Israeli group-homes alumni: Exploring the differences and in-care correlates. *Children and Youth Services Review, 28*, 133-157.

Schubert, C. A., Mulvey, E. P., Loughran, T. A., & Losoya, S. H. (2012). Perceptions of institutional experience and community outcomes for serious adolescent offenders. *Criminal Justice and Behavior, 39*(1), 71-93.

Sekol, I. (2013). Peer violence in adolescent residential care: A qualitative examination of contextual and peer factors. *Children and Youth Services Review, 35*(12), 1901-1912.

Smeets, K. C. (2014). Can Proactive and Reactive Aggression be Distinguished as Different Subtypes of Aggression in Adolescents? A Multi-Level Latent Class Analysis. In 61st Annual Meeting. AACAP.

Souverein, F. A., Van der Helm, G. H. P., & Stams, G. J. J. M. (2013). 'Nothing works' in secure residential youth care? *Children and Youth Services Review, 35*(12), 1941-1945.

Spruit, A., Schalkwijk, F., van Vugt, E. S., & Stams, G. J. J. M. (2016). *The relation between self-conscious emotions and delinquency: A meta-analysis*. *Aggression and Violent Behavior*, *28*, 12-20.

Stams, G. J., Brugman, D., Deković, M., van Rosmalen, L., van der Laan, P., & Gibbs, J. C. (2006). The moral judgment of juvenile delinquents: A meta-analysis. *Journal of abnormal child psychology*, *34*(5), 692-708.

Strijbosch, E. L. L., Huijs, J. A. M., Stams, G. J. J. M., Wissink, I. B., Van der Helm, G. H. P., De Swart, J. J. W., & Van der Veen, Z. (2015). The outcome of institutional youth care compared to non-institutional youth care for children of primary school age and early adolescence: A multi-level meta-analysis. *Children and Youth Services Review*, *58*, 208-218.

Sykes, G. (1958). *The Society of Captives.* Princeton, United States of America: Princeton University Press.

Taylor, S. E., Klein, L. C., Lewis, B. P., Gruenewald, T. L., Gurung, R. A., & Updegraff, J. A. (2000). Biobehavioral responses to stress in females: tend-and-befriend, not fight-or-flight. *Psychological review*, *107*(3), 411.

Tonkin, M. (2015). A review of questionnaire measures for assessing the social climate in prisons and forensic psychiatric hospitals. *International journal of offender therapy and comparative criminology.* https://doi.org/10.1177/0306624X15578834

Tremblay, R.E. (2003). Why socialization fails: the case of chronic physical aggression. In The Causes of Conduct Disorder and Serious Juvenile Delinquency (ed. B. Lahey, T. E. Moffitt and A. Caspi), pp. 182–224. Guilford Press : New York.

Tremblay, R.E. (2010). Developmental origins of disruptive behaviour problems: the ' original sin ' hypothesis, epigenetics and their consequences for prevention. *Journal of Child Psychology and Psychiatry 51*, 341–367.

Trout, A.L., Hagaman, J.L., Chmelka, M.B., Gehringer, R., Epstein, M.H. & Reid, R. (2008) The Academic, Behavioral, and Mental Health Status of Children and Youth at Entry to Residential Care, *Residential Treatment for Children & Youth, 25:4, 359-374.*

Turner, P., & Ireland, J. L. (2010). Do personality characteristics and beliefs predict intra-group bullying between prisoners? *Aggressive Behavior*, *36*(4), 261-270.

Van Dam, C., Nijhof, K., Scholte, R., & Veerman, J. W. (2010). Evaluatie nieuw zorgaanbod gesloten jeugdzorg voor jongeren met ernstige gedragsproblemen [Evaluation of a new *care supply in semi-secure residential youth care for juveniles with severe behaviour problems]. Nijmegen: Praktikon.*

Van Den Tillaart, J., Eltink, E., Stams, G., Van Der Helm, P., & Wissink, I. (2018). Aggressive Incidents in Residential Youth Care. *International Journal of Offender Therapy and Comparative Criminology*, *62*(13), 3991–4007. https://doi.org/10.1177/0306624X18758898

Van der Helm, G. H. P. (2011). *First do no harm: Living group climate in secure juvenile correctional institutions.* (Doctoral dissertation, Free University, Amsterdam, The Netherlands). Retrieved from http://dspace.ubvu.vu.nl/handle/1871/19953?show=full

Van der Helm, G. H. P., Boekee, I., Stams, G. J. J. M., & Van der Laan, P. H. (2011). Fear is the key: keeping the balance between flexibility and control in a Dutch youth prison. *Journal of Children's Services, 6*, 248-263. https://doi.org/10.1108/17466661111190947

Van der Helm, P., Matthys, W., Moonen, X., Giesen, N., Heijde, E.S. van der, & Stams, G.J.J.M. (2013). Measuring inappropriate responses of adolescents to problematic social situations in secure institutional and correctional youth care: A validation study of the TOPS-A. *Journal of Interpersonal Violence, 28,* 1579-1595.

Van der Helm, G. H. P., Stams, G. J. J. M., & Van der Laan, P. H. (2011). Measuring group climate in prison. *The Prison Journal, 91*, 158-176. https://doi.org/10.1177/0032885511403595

Van Langen, M. A. M., Wissink, I. B., Van Vugt, E. S., Van der Stouwe, T., & Stams, G. J J. M. (2014). The relation between empathy and offending: A meta-analysis. *Aggression and Violent Behavior, 19*, 179-189.

Van Spinhoven, P., Elzinga, B. M., Hovens, J. G., Roelofs, K., Zitman, F. G., van Oppen, P., & Penninx, B. W. (2010). The specificity of childhood adversities and negative life events

across the life span to anxiety and depressive disorders. *Journal of affective disorders*, *126*(1), 103-112.

Van Vugt, E., Lanctôt, N., Paquette, G., Collin-Vezina, D., & Lemieux, A. (2014). *Girls in residential care: From child maltreatment to trauma-related symptoms in emerging adulthood*. *Child Abuse & Neglect*, *38*(1), 114-122

Vassallo, S., Edwards, B., & Forrest, W. (2016). Childhood behavior problems and fighting in early adulthood: What factors are protective? *Journal of Criminal Justice*, *45*, 85-93.

Vermaes, I. P., & Nijhof, K. S. (2014). Zijn jongeren in jeugdzorgplus anders dan jongeren in de open residentiële jeugdzorg. *Orthopedagogiek: Onderzoek & Praktijk, 53,* 33-46.

Walter, J. (1999). Anti-Gewalttraining im Jugendstrafvollzug—Tummelplatz für "crime fighter"? [Anti-aggression training in youth detention—Play area for "crime fighter"?] Zeitschrift für Strafe und Vollzug, 1999, 23-28

Warren, P., Richardson, D. S., & McQuillin, S. (2011). Distinguishing among nondirect forms of aggression. *Aggressive behavior, 37*(4), 291-301.

White, H. R., Shi, J., Hirschfield, P., Mun, E. Y., & Loeber, R. (2010). Effects of institutional confinement for delinquency on levels of depression and anxiety among male adolescents. *Youth Violence and Juvenile Justice, 8*(4), 295-313.

Widom, C. S. (1989). The cycle of violence. *Science, 244*, 160–166. Retrieved from: http://courses.missouristate.edu/KarlKunkel/SOC540/widom.pdf

Zahn, M. A.; Day J.C.; Mihalic, S. F. & Tichavsky, L. (2009). Determining What Works for Girls in the Juvenile Justice System, a summary of evaluation evidence. *Crime & Delinquency, 55(2)*, 266-293. https://doi.org/10.1177/0011128708330649

Zahn-Waxler, C., Shirtcliff, E.A. & Woods, K. (2005). The origins and development of psychopathology in females and males. In In D. Cicchetti & D. Cohen (Eds), *Development & Psychopathology: vol1: Theory and methods* (2nd ed., ed., pp.76-138). New York: Wiley.

Zimbardo, P. G. (2007). Revisiting the Stanford Prison Experiment: A Lesson in the Power of Situation. *Chronicle of Higher Education, 53*(30).

CHAPTER 4

Aggressive incidents in residential youth care[3]

[3] Van Den Tillaart*, J., Eltink*, E., Stams, G., Van Der Helm, P., & Wissink, I. (2018). Aggressive Incidents in Residential Youth Care. International Journal of Offender Therapy and Comparative Criminology, 62(13), 3991–4007. https://Doi.org/10.1177/0306624X18758898. * both authors equally contributed and are considered first author

Abstract

It is assumed that residential group climate can have an effect on aggressive behavior in youth living in residential facilities, but it is largely unknown whether there are climate differences between the various types of residential facilities and whether residential group climate differently affects aggression incidents among youth placed in facilities that differ in levels of security (and openness). In current research, the differences in perception of residential group climate between open, semi-secure, and secure residential youth care facilities were examined as well as the association between residential group climate and aggression. In total, 159 youth (96 males, 63 females) completed the Prison Group Climate Instrument (PGCI), and (aggressive) incidents were recorded during a period of 3 months. Perception of residential group climate—including support from staff, group atmosphere among youth, possibilities for growth, and repression—did not differ between the various types of residential care, except for possibilities for growth. Youth in open and semi-secure facilities experienced more possibilities for growth than their peers in secure institutions. A more positive perception of group climate in open facilities proved to be related to less aggressive incidents at the living group. For semi-secure and secure facilities, no relation between residential group climate and aggression was found. Also, the longer youth stayed in residential youth care, the more aggressive incidents occurred.

Introduction

Residential youth care differs considerably around the world (Courtney & Iwaniec, 2009). Most countries place at least some children in residential facilities (Ainsworth & Thoburn, 2014), which differ in size (e.g., small group homes or large facilities) and purpose (James, 2011; Thoburn, 2010; Thoburn & Ainsworth, 2015). Ainsworth and Thoburn (2014) show that in English speaking countries (Ireland, Australia, USA and England) the use of residential care is minimal, whereas in other countries a high percentage of children stay in residential care (e.g., Italy, Czech Republic and Israel). In continental Western Europe staff is better trained, facilities are larger, and duration of stay is longer when compared to England and Australia (Ainsworth & Thoburn, 2014).

In many countries residential youth care is used as a last resort and preferably as a short term arrangement (e.g., in England, The Netherlands), although it is acknowledged that for a small group of youth long term residential care or even permanent placement seems inevitable (Thoburn, 2016). In the Netherlands, about 2% of Dutch (mostly justice-involved) youth live in open, semi-secure or secure residential facilities (Harder, Knorth, & Zandberg, & Tils, 2006), which is about 10% of all youth receiving youth care in the Netherlands (CBS, 2014; The Netherlands Institute of Social Research, 2009; Unicef, 2016). Government policy requires that ambulant care is considered first, and if not feasible, day treatment or foster care should be considered. If all these options are not viable or exhausted, residential care can be an option (Strijker & Knorth, 2007). In the Netherlands, living groups in residential youth care mostly consist of 6 to 12 youth, and are often for boys or girls only, although some facilities have mixed gender groups (Boendermaker, Van Rooijen, & Berg, 2010).

In the Netherlands, youth are usually involuntarily placed in residential youth care facilities because they have committed, or are suspect of, a criminal act (criminal law) or due to court-ordered supervision (civil law) (Bartelink, 2013; Boendermaker & Van Yperen, 2003). Youth are not only placed in these secure facilities for reasons of safety and punishment, but also to receive treatment and care (Bruning, Liefaart, & Volf, 2004; Harder, Knorth, & Kalverboer, 2013). Youth with severe emotional and behavioral problems can be placed by a judge in a semi-secure residential youth care facility (Harder, 2011). These facilities offer mandatory treatment, starting with a (relative short) period of residential care, where youth gradually work towards returning to society in more open facilities (Ten Brummelaar, Boendermaker, Harder, & Knorth, 2011). Treatment is characterized by gradual steps from more to less restrictive care, focusing on behavioral change, training and preparation for the future, and the transfer to a new living situation and aftercare (Van der Poel, Rutten, & Sondeijker, 2008).

In open facilities, placements can be involuntary as well as voluntary. Youth in open facilities are allowed a relatively great amount of freedom. They can leave the institution if they wish, attend school in the community, and have social contacts outside the institution. Some open facilities provide a short term (e.g., a few months) treatment period, which aims at quickly returning youth to their homes, whereas other open facilities have a focus on working towards independent living (James, 2011). Two meta-analyses showed that residential youth care can be effective for both younger children and adolescents as long as therapeutic conditions are met (De Swart et al., 2012; Strijbosch et al., 2015).

Research from Connor, Doerfler, Toscane, Volungis and Steingard (2004) showed that 92% of youth receiving residential treatment had more than one psychiatric diagnosis, and a vast majority thereof had at least one prior hospitalization (Baker, Kurland, Curtis, Alexander, & Papa-Lentini, 2007). Also, the majority of youth in residential treatment facilities have a history of trauma (Briggs et al., 2012; Jaycox, Ebener, Damesek, & Becker, 2004). Research in the Netherlands showed similar findings (Nijhof, Van Dam, Veerman, Engels, & Scholte, 2010; Vreugdenhil, Doreleijers, Vermeiren, Wouters, & Van den Brink, 2004); a predominant share of youth in residential youth care is diagnosed with at least one psychiatric disorder. Many youth placed in open or semi-secure residential youth care must be protected against themselves (e.g., running away, aggression or suicidal behavior) or against their environment (e.g., abusive parents, lover boys) (Nijhof et al., 2010). Youth in residential youth care often have complex emotional and behavioral problems, which may be accompanied by family-related issues. Also, the youth often have a mild intellectual disability, and sometimes a history of neglect, trauma or substance abuse (Boendermaker, Eijgenraam, & Geurts, 2004; Harder et al., 2006), in particular when they are placed in a residential facility due to delinquency (Asscher, Van der Put, & Stams, 2015).

More attention needs to be paid to the skills of staff in residential facilities to develop and maintain positive relationships with youth and create a therapeutic residential group climate (Bastiaanssen et al., 2012; Harder, 2011; Van Dam, Nijhof, Scholte, & Veerman, 2010; Van der Helm, 2011). Group climate in residential youth care has recently been defined as “the quality of the social and physical environment in terms of the provision of sufficient and necessary conditions for physical and mental health, well-being and personal growth of the residents, with respect for their human dignity and human rights as well as (if not restricted by judicial measures) their personal autonomy, aimed at successful participation in society” (Stams & Van der Helm, 2017). Residential group climate can vary from non-therapeutic to therapeutic. A therapeutic residential group climate is characterized by a structured and safe environment, with adequate

support from pedagogical staff (Knorth, Harder, Huyghen, Kalverboer, & Zandberg, 2010), opportunities to learn and develop (growth), clear rules and limits, and a secure atmosphere among youth (Van der Helm, Stams, & Van der Laan, 2011). A non-therapeutic residential group climate, on the other hand, is characterized by a lack of structure, unduly strict control, loss of autonomy, absence of mutual respect, boredom, feelings of despair, and lack of perspective (De Valk, Kuiper, Van der Helm, Maas, & Stams, 2016).

A therapeutic residential group climate has been shown to be associated with greater motivation for treatment (Van Binsbergen, 2003; Van der Helm, 2011; Van der Helm, Wissink, de Jongh, & Stams, 2013) more active coping (Van der Helm, Beunk, Stams, & Van der Laan, 2014), positive personality development (Van der Helm, Stams, Van Genabeek, & Van der Laan, 2012) and empathy (Van der Helm, Stams, Van der Stel, Van Langen, & Van der Laan, 2012). Finally, Schubert, Mulvey, Loughran, and Losoya (2012) found positive perceptions of residential group climate and efficacious after-care to reduce recidivism in juvenile delinquents. The current study examines whether a therapeutic residential group climate is associated with less aggressive incidents within (different types of) residential facilities.

Aggression and residential group climate

Aggression is defined as any form of behavior that is intended to harm someone physically or psychologically (Anderson & Bushman, 2002; Baron & Richardson, 2004; Berkowitz, 1993). A complex interaction of personal, interpersonal, and circumstantial variables has been shown to influence aggressive behavior (Fluttert, 2010; Hiday, 1997; Kettles, 2004; Nijman et al., 1999; Swanson et al., 1997). Youth in residential youth care have limited ability to react adequately in problematic social situations, and often use aggression as a problem solving strategy (Arsenio, Adams, & Gold, 2009; Crick & Dodge, 2008; Eltink, Van der Helm, Wissink, & Stams, 2015; Nas, Orobio de Castro, & Koops, 2005; Van der Helm, Matthys et al., 2013). Additionally, several studies on the influence of exposure to deviant peer culture (Dishion, McCord, & Poulin, 1999) showed how grouping youth can increase existing problems through deviancy training, when youth are exposed to peers' modeling and reinforcement of deviant behavior (Dishion, Spracklen, Andrews, & Patterson, 1996).

Van der Helm, Stams, et al. (2012) did not find a relation between a non-therapeutic residential group climate and self-reported aggression (with the BDHI-D) in a secure (juvenile correctional) institution, but did find that a therapeutic residential group climate was associated with less self-reported aggression, which was mediated by changes in personality development.

Heynen, Van der Helm, Cima, Stams and Korebrits (2016) found no association between residential group climate and self-reported proactive aggression, but did find a relation between repression and self-reported reactive aggression. Eltink et al., (2018) found a repressive group climate to be associated with later direct aggression among Dutch justice-involved youth, while type of facility (i.e. level of security) did not predict differences in aggression. Furthermore, research from Ros, Van der Helm, Wissink, Stams and Schaftenaar (2013) in a forensic treatment center for adult patients showed that a therapeutic residential group climate, with high support and opportunities for growth were associated with a decrease in aggressive incidents at the living group. De Decker and others (2017) found a significant inverse relation between, on the one hand, support and possibilities for growth, and on the other hand, the number and severity of aggressive incidents in a secure facility for youth care. It seems that residential group climate has an effect on aggression in secure facilities, but to date not much research has been conducted in open facilities.

Current research focuses on the perception of residential group climate in various types of residential youth care. It is expected that youth residing in semi-secure and secure facilities perceive residential group climate to be less therapeutic compared to youth in open facilities due to the deprivational character of secure facilities. It is also hypothesized that perception of residential group climate is related to the frequency of aggressive incidents within the different types of residential youth care. It is expected that youth who perceive the residential group climate as more therapeutic (i.e., high support from staff, many opportunities for growth, a safe and friendly atmosphere among the youth, and minimum or no repression) are less involved in aggression-related incidents. To gain more insight in the specific nature of aggressive incidents, these incidents are also compared to 'other incidents', which can be defined as norm-transgressive behaviors that violate social conventions or non-moral rules (i.e., absence after leave, refusal to follow instructions or smoking in one's room) rather than norm-transgressive behaviors that may violate moral standards, such as aggressive behavior.

Method

Participants

The data were collected from youth aged between 8 and 18, residing in the Amsterdam region in open living groups or semi-secure facilities and from youth aged between 14 and 22, residing in secure facilities. Twenty-seven living groups, consisting of a maximum of 10 youth per group, were asked to participate. The response rate was 74% amongst youth residing in living groups. These

living groups varied from solely male groups or female groups, to mixed groups. The sample consisted of 159 youth who resided in residential youth care. From the open living groups, 72 youth participated (25 males and 47 females), aged 15.3 years on average (*SD* = 1.7). Youth in open living groups stayed on average 23.76 weeks (*SD* = 27.4), from a minimum of one week to a maximum of two years and five months. From the semi-secure facilities, 43 youth participated (27 males and 16 females), aged 15.3 years on average (*SD* = 1.1). They stayed on average 28.21 weeks (*SD* = 31.1), from a minimum of two weeks to a maximum of three years. Lastly, 44 male youth participated from the secure facility, aged 17.6 years on average (*SD* = 1.8). Youth in the secure facility stayed on average 27.7 weeks (*SD* = 31.2), from a minimum of one week to a maximum of two years and four months. Of the 159 participating youth, 27 were born outside of the Netherlands, mainly in Morocco, Surinam or the Dutch Antilles. From 13 adolescents the country of birth was unknown.

Procedure

All staff was approached for participation by means of an introduction of this research in team meetings. The goal was to stimulate team members to motivate youth to participate and to advocate the significance of this study. The staff conducted the surveys in the living groups. In most cases the surveys were all administered at the same moment for all youth in the living group, who independently answered the questions. The surveys were coded in order to ensure anonymity of the participants.

Measuring instruments

Youth were questioned about their perception of the residential group climate by means of the Prison Group Climate Instrument (PGCI). Age, gender, length of stay and ethnical background-data were also collected.

*Prison Group Climate Instrument (PGCI).*The PGCI is a self-report questionnaire containing 36 items, developed to measure the perception of group climate in a residential facility (Van der Helm et al., 2011). Youth give their opinion on residential group climate, using a 5-point Likert scale varying from 1 (totally not applicable) to 5 (totally applicable). The questionnaire consists of four dimensions: support (12 items), growth (eight items), repression (nine items) and atmosphere (seven items). Paying attention to youth, taking complaints seriously, respect and trust are important characteristics of the support dimension. Growth assesses learning perceptions and hope for the future. Repression assesses perceptions of strictness and control and unfair rules.

Finally, atmosphere assesses the way youth treat and trust each other, and the perception of safety. Examples of items are: "The group workers treat me with respect" (support), "I work on my future here" (growth), "The group workers always get it their way" (repression), and "We trust one another in the group" (atmosphere). Reliability analysis of the PGCI, measured by means of Cronbach's alfa, showed that all dimensions of the questionnaire were reliable. For support α = .90, growth α = .87, repression α = .71, and atmosphere α = .83. The total reliability of the questionnaire was α = .93.

Aggression incidents

Aggression incidents from the youth were examined by means of incident reports for a period of three months. The number of reported incidents in official systems does not include all incidents which occur within groups (Ros et al., 2013). Therefore, incidents from individual daily reports were also assessed. In total 1,273 incidents were collected, in which one or more of the 159 youth was or were involved. In the twelve participating open living groups, in total, 646 incidents occurred, averaging to 8.97 per youth (*SD* = 8.0), against in total 431 incidents in the seven semi-secure living groups, averaging to 10.01 per youth (*SD* = 7.7). In eight living groups of the secure institution, in total, 196 incidents occurred, averaging to 4.45 per youth (*SD* = 5.7). The number of incidents per youth varied from 0 to 39.

The incidents are assigned to one of the following categories: (1) physical aggression focused on employees, (2) verbal aggression focused on employees (also cursing and expressing threats), (3) physical aggression focused on peers, (4) verbal aggression focused on peers, (5) physical aggression focused on supplies, (6) arson (including smoking on room), (7) non-justified absence (including escape, absence after temporary leave), (8) positive urine checks (including illegal use of substances), (9) contrabands, (10) suicide, suicide attempt or auto-mutilation, and (11) violation of rules (including refusing instructions). Within this categorization a differentiation is made between 'aggression' and 'other incidents', where categories 1 to 5 are considered as aggressive, and 6 to 11 are considered other incidents. Aggressive incidents contain verbal or physical violence aimed towards persons and/or objects. Other incidents encompass automutilation, returning late from leave, smoking in one's room, escape, or refusing instructions.

Regarding incidents, 20 participants' incidents were independently evaluated by means of ICC. A high degree of reliability was found between the two raters. The ICC of the total number of scored incidents was .905, 95% confidence interval (CI) = [.834 to .956], F (19,513) = 10.551, p< .001). The ICC of the total number of aggressive incidents was .928, 95% CI = [.819 to .972], F

(19,19)= 13.982, p <.001). For the total number of scored 'other incidents', the average ICC was .934 , 95% CI = [.834 to .973]. *F* (19,19)= 15.236, *p* <.001).

Statistical analysis

A series of one-way ANOVA's was conducted using SPSS, in order to examine the difference in perception of residential group climate among youth residing in open, semi-secure and secure facilities, with Student-Newman-Keuls (SNK) corrected tests for post-hoc differences. Subsequently, a multivariate logistical regression analysis was used to examine the relation between the perception of residential group climate and aggressive incidents, controlling for duration of stay, age, gender and type of facility.

Results

Perception of residential group climate within various types of residential youth care

To test the differences in the perception of group climate between various types of residential youth care, a series of one-way ANOVA's were performed. Table 1 presents the average scores of the perception of overall residential group climate and the separate dimensions of residential group climate in three different types of residential youth care. Overall residential group climate perception did not significantly differ between the different types of residential youth care (open, semi-secure or secure). Post-hoc analysis showed that youth residing in open facilities and semi-secure facilities perceived significantly more opportunities for growth than adolescents residing in secure facilities, *F* (2, 146) = 5.17, *p* = .01. Concerning the dimensions support, repression and atmosphere no significant differences were found.

Table 1. *Oneway ANOVA for differences in perception of group climate between types of residential youth care*

Dimension	Open	Open	Semi Sec	Semi Sec	Secure	Secure		
	N	*M (SD)*	*N*	*M (SD)*	*N*	*M (SD)*	*F*	*Df*
Support	63	3.69 (.80)	40	3.48 (.89)	39	3.51 (.83)	.954	2.139
Growth	67	3.43[a] (.98)	41	3.51[a] (.97)	41	2.88[b] (.99)	5.17**	2.146
Repression	65	3.12 (.73)	39	3.43 (.74)	40	3.33 (.63)	2.66	2.141
Atmosphere	68	3.46 (.88)	41	3.14 (.85)	41	3.52 (.90)	2.38	2.147
Group climate	56	3.42 (.65)	38	3.17 (.73)	37	3.18 (0.67)	2.11	2.128

Note. Different superscript (a,b) show significant post-hoc differences on p < .05, corrected for likelihood (SNK)

** = *p* < .01

The association between residential group climate and aggressive incidents

First, the relation between the perception of residential group climate and aggression was examined, using a multivariate logistic regression analysis. The logistic regression equation was not significant for 'other incidents' –χ^2 (*N* = 159, *df* = 8) = 14.667, *ns* – but significant for aggressive incidents – χ^2 (*N* = 159, *df* = 8) = 36.018, *p* < .001. Table 2 shows that with every additional week an youth resided in residential youth care, the likelihood of an aggressive incident increased by 27% (Odds Ratio = 1.27). The occurrence of aggressive incidents in open facilities substantially decreased when the perception of residential group climate was more positive (Odds ratio= 0.36). A total of 29% of the differences in aggressive incidents was associated with the length of stay, age, gender, type of facility and perception of residential group climate. All logistic regression analyses were repeated for the four residential group climate dimensions, but these analyses did not yield significant regression equations.

Table 2. *Logistic regression analysis: perception of group climate and aggression incidents*

Predictors	B	SE	Wald	Odds ratio	95% C.I. Lower	95% C.I. Upper
Number of weeks in residential youth care	0.238	0.069	11.86***	1.27	1.11	1.45
Age	-0.238	0.137	3.00	0.79	0.60	1.03
Gender	-0.976	0.503	3.77	0.377	0.141	1.01
Open institution	-0.976	0.520	3.53	0.377	0.136	1.04
Secure institution	0.392	0.639	0.38	1.48	0.423	5.18
Group climate	-0.085	0.515	0.027	0.919	0.335	2,52
Group climate in open institution	-1.01	0.496	4.19*	0.363	0.137	.958
Group climate in secure institution	-0.173	0.496	0.121	0.841	0.318	2.23

Note χ^2 *(8) = 36,02, p < .001. CI= Confidence Interval*

** p < .05; ** p < .01, *** p= .001*

Discussion

The present study examined differences in the perception of residential group climate among youth in various types of residential youth care, and relations between residential group climate and (aggressive) incidents in residential youth care. The perception of total residential group climate did not differ between youth residing in the different types of residential youth care, but youth in open and semi-secure facilities perceived more opportunities for growth than youth in secure residential care. Secondly, results showed that only the perception of a therapeutic residential group climate in open institutions was associated with fewer aggressive incidents. Finally, the longer youth resided within residential youth care, the greater the likelihood of aggressive incidents. No associations were found between residential group climate and other incidents.

No differences were found in the perception of support, repression and group atmosphere between open, semi-secure and secure facilities. This could be explained by a focus on individual treatment in all types of youth care, the delivery of well-structured programs and a focus on building a positive peer culture (Gibbs, 1996; Gibbs, Potter & Goldstein, 1995; Helmond, Overbeek, & Brugman, 2012; Knorth et al., 2010). All youth care facilities in this study were divisions of one organization (Spirit Youth Care) where staff is trained (i.e. in responsiveness) in creating a good learning and living environment for adolescents. All boys and girls are assigned a mentor, who supports the youth's development, speaks with him/her privately on a weekly basis, and keeps in contact with his/her caregivers. Moreover, many youth have not experienced much support and structure from their social environment before residential placement nor a safe place to develop satisfying relationships with peers. They might experience high support, a reassuring structure and a positive peer culture when entering residential youth care (Souverein, Van der Helm, & Stams, 2013).

Youth in the open and semi-secure facilities experienced more opportunities for growth than their peers in the secure facility. Growth is closely connected with the concept of 'learning' and improvement in domains such as education, work, and relationships (Langdon, 2007). In open and semi-secure facilities youth spend more time outside the facility being part of society. Aspects of 'normal life', such as attending school and having supervised and unsupervised leisure time, take place outside the residential facility and is less restricted compared to secure facilities. This may explain why youth in open and semi-secure facilities perceived more opportunities for growth than their peers in secure facilities.

The hypothesis about the relation between perception of residential group climate and incidents was partly confirmed. Only in the open facilities a therapeutic residential group climate was related to fewer aggressive incidents. A possible explanation may be that youth in open facilities are often placed on a voluntary basis, and therefore more motivated for treatment than youth in semi-secure or secure facilities. Also, they are less likely to have a conduct disorder; youth who are placed involuntarily have a three times higher odds of receiving a CD diagnosis and two times higher odds of receiving a DSM-IV diagnosis than youth placed voluntarily (Jozefiak et al., 2016). It is possible that due to these differences (e.g., in motivation and disorders) youth in (semi-) secure facilities are less susceptible for positive environmental influences (Belsky, Bakermans-Kranenburg, & Van IJzendoorn, 2007), such as a therapeutic residential group climate. Notably, a recent study of Van IJzendoorn and Bakermans-Kranenburg (2015) showed that interventions targeting externalizing behaviors only had a positive effect on those who were genetically

susceptible for positive environmental influences, whereas this was not the case for interventions targeting internalizing problems. In the end, it is the subtle interplay between genes and environment, including the degree to which youth respond to reward and punishment and actively seek an environment that fits their genetic make-up or evoke harsh or supportive behavior from parents or other caregivers, that prevails (Weeland, Overbeek, Orobio de Castro, & Matthys, 2015). According to Weeland et al. (2015), this calls for highly personalized (residential) interventions in terms of clinical focus, intention, and duration (Stams & Van der Helm, 2017).

Many youth in semi-secure and secure residential facilities have a history of multiple placements in non-residential and other residential treatment settings, without evidence of any positive effects on their behavior (Wheatly, Waine, Spence, & Hollin, 2004). This might indicate a lack of susceptibility to positive environmental influences as well. Such lack of susceptibility may not only relate to genetic deficits as already outlined above and neurophysiological deficits (Cornet, De Kogel, Nijman, Raine, & Van der Laan, 2014), but also to an accumulation of risks limiting the possible effects of protective environmental factors (Vanderbilt-Adriance & Shaw, 2008). These risks have been described in research by Vermaes and Nijhof (2014) and Smeets (2014), showing that there are many differences between youth in semi-secure and open residential youth care. Youth in semi-secure youth care were more likely to demonstrate risky behavior, use drugs, and were more vulnerable for negative peer influences. Also, youth in semi-secure youth care had lower self-esteem, impaired emotion regulation and showed more antisocial and aggressive externalizing problems, whereas youth in open youth care showed more internalizing problems (Vermaes & Nijhof, 2014). In secure facilities, as compared to semi-secure facilities, aggressive behavior, autism, substance abuse and personality disorders are more common (Smeets, 2014).

The perception of residential group climate was found not to be associated with ‘other incidents’, regardless of type of facility. This could be explained by the fact that ‘other incidents’ can be considered as norm-transgressive behaviors that violate social conventions or non-moral rules (Turiel, 2002). Children and adolescents judge moral transgressions as more wrong than such social-conventional norm-transgressions (Harvey, Fletcher, & French, 2001). They consider issues of harm to others’ welfare to be wrong, independent of rules and authority, and worthy of more severe punishment than any other type of transgression. It is plausible to suggest that residential group climate does not have an effect on the less serious social-conventional norm-transgressions, because these transgressions constitute a more general age-dependent aspect of identity development, and are therefore less likely to be affected by the social environment.

Current research showed that the length of stay was related to the number of aggressive incidents. The first explanation for this finding would be that frustration amongst youth increases as their length of stay also increases, and therefore become more involved in aggressive incidents. Second, by observing aggressive behavior of peers, youth can copy tactics and strategies that increase the likelihood of imitation of aggressive behavior (Bandura, 1978). In the literature there are some other findings that length of stay is associated with aggression, but it is unclear whether length of stay influences the level of aggression or whether the level of aggression influences the length of stay. For instance, Barlow, Grenyer and Ilkiw-Lavalle (2000) found that in psychiatric facilities aggressive patients had a longer length of stay than non-aggressive patients. Also, predictors of longer length of stay include previous contact with child and adolescence psychiatric services, substance abuse and absconding during treatment (Andreasson et al., 2014). A long stay in prison is associated with diminished active coping, lower levels of treatment motivation and loss of hope (Goffman, 1957; Irwin & Owen, 2005; Maruna, 2008; Toch, 2008; Toch & Kupers, 2007). Van der Helm et al. (2014) found a positive relation between length of stay and therapeutic residential group climate. In current research no relation between length of stay and residential group climate was found.

To conclude, the results showed that the perception of residential group climate of youth in open facilities is related to aggressive incidents. These youth not only differ from youth placed in (semi-)secure facilities, but may also be more susceptible to positive environmental influences than youth in semi-secure and secure facilities. Youth in open facilities have more possibilities for growth and more freedom to participate in the community.

There are some important limitations to be mentioned. First, a sample of convenience was used, which limits the generalizability of the findings. In addition, all facilities in this study were divisions of one youth care organization in the Netherlands, Spirit, and it is unclear whether the findings generalize to other facilities. Secondly, the PGCI is a self-report questionnaire, whereby youth could provide socially desirable answers. However, there seems to be no strong incentive for providing socially desirable answers regarding the perception of residential group climate. Moreover, perception based on experiences rather than more objective information can be expected to influence subsequent behavior and developmental outcomes (Steinberg, 2009). Nevertheless, the perception of residential group climate from staff's view is not taken into account, resulting in a unilateral image about the perception of residential group climate. Finally, the number of consulted reported incidents in official systems could be an underestimation of the total number of incidents occurring at the groups (Ros et al., 2013).

Despite these limitations, this study was the first to investigate whether there are differences between the perception of residential group climate in various types of residential youth care and whether these differences were related to the occurrence of (aggressive) incidents. It was found that the perception of residential group climate in open facilities is related to aggressive incidents. Findings imply that there are possibilities for influencing the number of aggressive incidents by working towards a more therapeutic group climate, at least in open facilities. Furthermore, this study provides empirical support for the relation between length of stay and aggressive incidents. However, more research is needed to establish the direction of this relation. Residential group climate may be an antecedent of aggressive incidents, but aggressive incidents may also be a precursor of residential group climate. Also, additional research is needed on susceptibility for positive environmental influences of youth in residential care, specifically in how to create a therapeutic alliance and in how to reduce stress to further decrease the prevalence of aggressive behavior in semi-secure and secure facilities (Van der Helm & Stams, 2012).

Yet, following the results, it is advised that ongoing training of staff is facilitated, concentrating on providing support, future perspective to the youth and creating a safe atmosphere where learning becomes possible. In creating a therapeutic residential group climate in open facilities the occurrence of aggressive incidents may decrease. In semi-secure and secure facilities more attention should be given to create possibilities for growth. Residential youth care should contribute to the development of youth and a therapeutic residential group climate, and less aggressive incidents may contribute to better treatment results.

References

Ainsworth, F., & Thoburn, J. (2014). An exploration of the differential usage of residential childcare across national boundaries. *International Journal of Social Welfare*, *23*(1), 16-24.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Anderson, C. A., & Bushman, B. J. (2003). Human aggression. *Annual Review of Organizational Psychology and Organizational Behavior*, *53*, 27-51.

Andreasson, H., Nyman, M., Krona, H., Meyer, L., Anckarsäter, H., Nilsson, T., & Hofvander, B. (2014). Predictors of length of stay in forensic psychiatry: The influence of perceived risk of violence. *International Journal of Law and Psychiatry*, *37*, 635-642.

Arsenio, W. F., Adams, E., & Gold, J. (2009). Social information processing, moral reasoning, and emotion attributions: Relations with adolescents' reactive and proactive aggression. *Child Development*, *80*, 1739-1755.

Asscher, J. J., Van der Put, C. E., & Stams, G. J. J. M. (2015). Gender differences in the association between child maltreatment and adolescent offending. *Journal of Family Violence*, *30*, 215-225.

Baker, A. J., Kurland, D., Curtis, P., Alexander, G., & Papa-Lentini, C. (2007). Mental health and behavioral problems of youth in the child welfare system: Residential treatment centers compared to therapeutic foster care in the Odyssey Project population. *Child Welfare*, *86*(3), 97-123.

Bandura, A. (1978). Social learning theory of aggression. *Journal of Communication*, *28*(3), 12-29.

Barlow, K., Grenyer, B., & Ilkiw-Lavalle, O. (2000). Prevalence and precipitants of aggression in psychiatric inpatient units. *Australian & New Zealand Journal of Psychiatry*, *34*, 967- 974.

Baron, R. A., & Richardson, D. R. (2004). *Human aggression*. New York, NY: Plenum Press.

Bartelink, C. (2013). *Uithuisplaatsing: wat werkt?* [Out of home placement: What works?]. Utrecht: Nederlands Jeugdinstituut.

Bastiaanssen, I. L., Kroes, G., Nijhof, K. S., Delsing, M. J., Engels, R. C., & Veerman, J. W. (2012). Measuring group care worker interventions in residential youth care. *Child & Youth Care Forum*, *41*, 447-460.

Belsky, J., Bakermans-Kranenburg, M. J., & Van IJzendoorn, M. H. (2007). For better and for worse: Differential susceptibility to environmental influences. *Current Directions in Psychological Science*, *16*, 300-304.

Berkowitz, L. (1993). Aggression: It's causes, consequences, and control. *Aggressive Behavior*, *20*, 464-466.

Boendermaker, L., Eijgenraam, K., & Geurts, E. (2004). *Crisisplaatsingen in de opvanginrichtingen* [Crisis placements in correctional youth facilities]. Utrecht: Nederlands Instituut voor Zorg en Welzijn Jeugd.

Boendermaker, L., Van Rooijen, K., & Berg, T. (2010). *Residentiële jeugdzorg: Wat werkt?* [Residential youth care: What works?]. Utrecht: Netherlands Youth Institute.

Boendermaker, L., & van Yperen, T. (2003). *Kansen in de keten. Een gemeenschappelijk referentiekader voor de justitiële jeugdinrichtingen*, Den Haag, The Netherlands: Dienst Justitiële Instellingen. [Chances in the Chain; a shared reference framework for correctional youth facilities]. Rapport in opdracht van de Dienst Justitiële Inrichtingen.

Briggs, E. C., Greeson, J. K., Layne, C. M., Fairbank, J. A., Knoverek, A. M., & Pynoos, R. S. (2012). Trauma exposure, psychosocial functioning, and treatment needs of youth in residential care: Preliminary findings from the NCTSN Core Data Set. *Journal of Child & Adolescent Trauma*, *5*, 1-15.

Bruning, M. R., Liefaard, T., & Volf, L. M. Z. (2004). *Rechten in justitiële jeugdinrichtingen.* [Rights in correctional youth facilities]. Amsterdam, The Netherlands: Vrije Universiteit. Centraal Bureau voor de Statistiek. (2014). *Gezondheid en zorg in cijfers 2014* [Health and Care in figures 2014]. Den Haag: Centraal Bureau voor de Statistiek Author.

Connor, D. F., Doerfler, L. A., Toscano, P. F. Jr., Volungis, A. M., & Steingard, R. J. (2004). Characteristics of children and adolescents admitted to a residential treatment center. *Journal of Child and Family Studies*, *13*, 497-510.

Cornet, L. J., De Kogel, C. H., Nijman, H. L., Raine, A., & Van der Laan, P. H. (2014). Neurobiological factors as predictors of cognitive-behavioral therapy outcome in individuals with antisocial behavior: A review of the literature. *International Journal of Offender Therapy and Comparative Criminology*, *58*, 1279-1296.

Courtney, M. E., & Iwaniec, D. (Eds.). (2009). *Residential care of children: Comparative perspectives*. Oxford University Press.

Crick, N. R., & Dodge, K. A. (2008). Social-information-processing mechanisms in reactive and proactive aggression. *Child Development*, *67*, 993-1002.

De Decker, A., Lemmens, L., Van der Helm, P., Bruckers, L., Molenberghs, G., & Tremmery, S. (2017). The relation between aggression and the living group climate in a forensic treatment unit for adolescents: A pilot study. *International Journal of Offender Therapy and*

Comparative Criminology. Advance online publication. https://doi.org/10.1177/0306624X17712347

De Swart, J. J. W., Van den Broek, H., Stams, G. J. J. M., Asscher, J. J., Van der Laan, P. H., Holsbrink-Engels, G. A., & Van der Helm, G. H. P. (2012). The effectiveness of institutional youth care over the past three decades: A meta-analysis. *Children and Youth Services Review*, *34*, 1818-1824.

De Valk, S., Kuiper, C., Van der Helm, G. H. P., Maas, A. J. J. A., & Stams, G. J. J. M. (2016). Repression in residential youth care: A scoping review. *Adolescent Research Review*, *1*, 195-216.

Dishion, T. J., McCord, J., & Poulin, F. (1999). When interventions harm: Peer groups and problem behavior. *American Psychologist*, *54*, 755-764.

Dishion, T. J., Spracklen, K. M., Andrews, D. W., & Patterson, G. R. (1996). Deviancy training in male adolescent friendships. *Behavior Therapy*, *27*, 373-390.

Eltink, E. M. A., Ten Hoeve, J., De Jongh, T., Van der Helm, G. H. P., Wissink, I. B., & Stams, G. J. J. M. (2018). Stability and change of adolescents' aggressive behavior in residential youth care. *Child & Youth Care Forum* (pp. 1-19). Springer, US.

Eltink, E. M. A., Van der Helm, G. H. P., Wissink, I. B., & Stams, G. J. J. M. (2015). The relation between living group climate and reactions to social problem situations in detained adolescents: I stabbed him because he looked mean at me." *International Journal of Forensic Mental Health, 14*, 101-109.

Fluttert, F. A. J. (2011). *Management of inpatient aggression in forensic mental health nursing: The application of the early recognition method* (Doctoral dissertation, Utrecht University).

Gibbs, J. C., Potter, G. B., Barriga, A. Q., & Liau, A. K. (1996). Developing the helping skills and prosocial motivation of aggressive adolescents in peer group programs. *Aggression and Violent Behavior*, *1*, 283-305.

Gibbs, J. C., Potter, G. B., & Goldstein, A. P. (1995). *The EQUIP program: Teaching youth to think and act responsibly through a peer-helping approach*. Champaign, IL: Research Press.

Goffman, E. (1961). On the characteristics of total institutions. In Symposium on preventive and social psychiatry (pp. 43-84). Washington, DC: Walter Reed Army Medical Centre.

Harder, A. T. (2011). *The downside up? A study of factors associated with a successful course of treatment for adolescents in secure residential care*. Groningen, The Netherlands: University Library Groningen.

Harder, A. T., Knorth, E. J., & Kalverboer, M. E. (2013). A secure base? The adolescent-staff relationship in secure residential youth care. *Child & Family Social Work*, *18*, 305-317.

Harder, A. T., Knorth, E. J., Zandberg, T., & Tils, J. (2006). *Residentiële jeugdzorg in beeld: een overzichtsstudie naar de doelgroep, werkwijzen en uitkomsten* [Residential youth care in sight: An overview of target group, methods and outcomes]. Amsterdam, The Netherlands: SWP Publishing.

Harvey, R. J., Fletcher, J., & French, D. J. (2001). Social reasoning: A source of influence on aggression. *Clinical Psychology Review*, *21*, 447-469.

Helmond, P., Overbeek, G., & Brugman, D. (2012). Program integrity and effectiveness of a cognitive behavioral intervention for incarcerated youth on cognitive distortions, social skills, and moral development. *Children and Youth Services Review*, *34*, 1720-1728.

Heynen, E. J. E., Van der Helm, G. H. P., Cima, M. J., Stams, G. J. J. M., & Korebrits, A. M. (2016). The relation between living group climate, aggression, and callous-unemotional traits in delinquent boys in detention. *International Journal of Offender Therapy and Comparative Criminology*, *24*(43), 1-18.

Hiday, V. (1997). Understanding the connection between mental illness and violence. *International Journal of Law and Psychiatry*, *20*, 399-417.

Irwin, J., & Owen, B. (2005). Harm and the contemporary prison. In L. Liebling & S. Maruna (Eds.), *The effects of imprisonment* (pp. 94-117). New York, NY: Routledge.

James, S. (2011). What works in group care? A structured review of treatment models for group homes and residential care. *Children and Youth Services Review*, *33*, 308-321.

Jaycox, L. H., Ebener, P., Damesek, L., & Becker, K. (2004). Trauma exposure and retention in adolescent substance abuse treatment. *Journal of Traumatic Stress*, *17*, 113-121.

Jozefiak, T., Kayed, N. S., Rimehaug, T., Wormdal, A. K., Brubakk, A. M., & Wichstrøm, L. (2016). Prevalence and comorbidity of mental disorders among adolescents living in residential youth care. *European Child & Adolescent Psychiatry*, *25*, 33-47.

Kettles, A. M. (2004). A concept analysis of forensic risk. *Journal of Psychiatric and Mental Health Nursing*, *11*, 484-493.

Knorth, E. J., Harder, A., Huyghen, A. M. N., Kalverboer, M. E., & Zandberg, T. (2010). Residential youth care and treatment research: Care workers as key factor in outcomes? *International Journal of Child and Family Welfare*, *13*(1/2), 49-67.

Langdon, F. J. (2007). *Beginning teacher learning and professional development: An analysis of induction programmes* (Doctoral dissertation). The University of Waikato, Hamilton, New Zealand.

Maruna, S. (2008). *Making good: How ex-convicts reform and rebuild their lives*. Washington, DC: American Psychological Association.

Nas, C. N., Orobio, de, Castro, B., & Koops, W. (2005). Social information processing in delinquent adolescents. *Psychology, Crime & Law*, *11*, 363-375.

Nijhof, K. S., Van Dam, C., Veerman, J. W., Engels, R. C., & Scholte, R. H. (2010). Nieuw Zorgaanbod: Gesloten jeugdzorg voor adolescenten met ernstige gedragsproblemen [Secure residential care for adolescents with severe behavioral problems]. *Pedagogiek*, *30*, 177-191.

Nijman, H. L. I., Muris, P., Merckelbach, H. L. G. J., Palmstierna, T., Wistedt, B., Vos, A. M., . . . Allertz, W. (1999). The Staff Observation Aggression Scale–Revised (SOAS-R). *Aggressive Behavior*, *25*, 197-209.

Ros, N., Van der Helm, G. H. P., Wissink, I., Stams, G. J. J. M., & Schaftenaar, P. (2013). Institutional climate and aggression in a secure psychiatric setting. *Journal of Forensic Psychiatry & Psychology*, *24*, 713-727.

Schubert, C. A., Mulvey, E. P., Loughran, T. A., & Losoya, S. H. (2012). Perceptions of institutional experience and community outcomes for serious adolescent offenders. *Criminal Justice and Behavior*, *39*, 71-93.

Smeets, E. (2014). Education in young offender institutions and secure youth care institutions. *Educational Research and Evaluation*, *20*, 67-80.

Souverein, F. A., Van der Helm, G. H. P., & Stams, G. J. J. M. (2013). "Nothing works" in secure residential youth care? *Children and Youth Services Review*, *35*, 1941-1945.

Stams, G. J. J. M., & Van der Helm, G. H. P. (2017). What works in residential programs for aggressive and violent youth? Treating youth at risk for aggressive and violent behavior in (secure) residential care. In P. Sturmey (Ed.), *The Wiley handbook of violence and aggression* (pp. 1-12). Wiley.

Steinberg, L. (2009). Should the science of adolescent brain development inform public policy? *American Psychologist*, *64*, 739-750.

Strijbosch, E. L. L., Huijs, J. A. M., Stams, G. J. J. M., Wissink, I. B., Van der Helm, G. H. P., De Swart, J. J. W., & Van der Veen, Z. (2015). The outcome of institutional youth care compared to non-institutional youth care for children of primary school age and early adolescence: A multi-level meta-analysis. *Children and Youth Services Review*, *58*, 208-218.

Strijker, J., & Knorth, E. J. (2007). Family fostering behind the dykes: Practice and research. In H. Grietens, E. J. Knorth, P. Durning, & J. Dumas (Eds.), *Promoting competence in children and families* (pp. 125-148). Leuven: Leuven University Press.

Swanson, J., Estroff, S., Swartz, M., Borum, R., Lachicotte, W., Zimmer, C., & Wagner, R. (1997). Violence and severe mental disorder in clinical and community populations: The effects of psychotic symptoms, comorbidity, and lack of treatment. *Psychiatry*, *60*(1), 1-22.

Ten Brummelaar, M. D. C., Boendermaker, L., Harder, A. T., & Knorth, E. J. (2011). *JeugdzorgPlus. Trajectzorg voor jeugdigen met ernstige gedragsproblemen*. [Care for youth with severe behavioral problems] Groningen, The Netherlands: Uitgeverij Stichting Kinderstudies.

Thoburn, J. (2010). Achieving safety, stability and belonging for children in out-of-home care: The search for "what works" across national boundaries. *International Journal of Child and Family Welfare*, *12*(1/2), 34-48.

Thoburn, J. (2016). Residential care as a permanence option for young people needing longer-term care. *Children and Youth Services Review*, *69*, 19-28.

Thoburn, J., & Ainsworth, F. (2015). Making sense of differential cross-national placement rates for therapeutical residential care. In J. K. Whitaker, J. Del Valle, & L. Holmes (Eds.), *Therapeutical residential care for children and youth* (pp. 31-46). London, England: Jessica Kingsley.

Toch, H. (2008). Punitiveness as "behavior management." *Criminal Justice and Behavior*, *35*, 388-397.

Toch, H., & Kupers, T. A. (2007). Violence in prisons, revisited. *Journal of Offender Rehabilitation*, *45*(3/4), 1-18.

Turiel, E. (2002). *The culture of morality: Social development, context, and conflict*. New York, NY: Cambridge University Press.

United Nations International Children's Emergency Fund. (2016). Kinderrechten in Nederland; Jaarbericht 2016 [Child Rights in the Netherlands, 2016].

Van Binsbergen, M. H. (2003). *Motivatie voor behandeling: Ontwikkeling van behandelmotivatie in een justitiële instelling* [Motivation for treatment; development of treatment motivation in a correctional youth facility]. Antwerp, Belgium: Garant.

Van Dam, C. V., Nijhof, K. S., Scholte, R. H. J., & Veerman, J. W. (2010). *Evaluatie Nieuw Zorgaanbod. Gesloten jeugdzorg voor jongeren met ernstige gedragsproblemen.* [Evaluation of new services. Secure residential care for young people with severe

behavioural problems). Nijmegen, The Netherlands: Praktikon/Behavioural Science Institute, Radboud Universiteit Nijmegen.

Vanderbilt-Adriance, E., & Shaw, D. S. (2008). Conceptualizing and re-evaluating resilience across levels of risk, time, and domains of competence. *Clinical Child and Family Psychology Review*, *11*, 30-58.

Van der Helm, G. H. P. (2011). *First do no harm: Living group climate in secure juvenile correctional institutions* (Doctoral thesis). Uitgeverij SWP BV, Amsterdam, The Netherlands.

Van der Helm, G. H. P., Beunk, L., Stams, G. J. J. M., & Van der Laan, P. H. (2014). The relation between detention length, living group climate, coping and treatment motivation among juvenile delinquents in a youth correctional facility. *The Prison Journal*, *94*, 260-275.

Van der Helm, G. H. P., Matthys, W., Moonen, X., Giesen, N., Van der Heide, E. S., & Stams, G. J. J. M. (2013). Measuring inappropriate responses of adolescents to problematic social situations in secure institutional and correctional youth care: A validation study of the TOPS-A. *Journal of Interpersonal Violence*, *28*, 1579-1595.

Van der Helm, G. H. P., & Stams, G. J. J. M. (2012). Conflict and coping by clients and group workers in secure residential facilities. In K. T. I. Oei & M. S. Groenhuijsen (Eds.), *Progression in forensic psychiatry: About boundaries* (pp. 553-564). Deventer, The Netherlands: Kluwer.

Van der Helm, G. H. P., Stams, G. J. J. M., & Van der Laan, P. H. (2011). Measuring group climate in prison. *The Prison Journal*, *91*, 158-176.

Van der Helm, G. H. P., Stams, G. J. J. M., Van der Stel, J. C., Van Langen, M. M., & Van der Laan, P. H. (2012). Group climate and empathy in a sample of incarcerated boys. *International Journal of Offender Therapy and Comparative Criminology*, *56*, 1149-1160.

Van der Helm, G. H. P., Stams, G. J. J. M., Van Genabeek, M., & Van der Laan, P. H. (2012). Group climate, personality, and self-reported aggression in incarcerated male youth. *Journal of Forensic Psychiatry & Psychology*, *23*, 23-39.

Van der Helm, G. H. P., Wissink, I. B., De Jongh, T., & Stams, G. J. J. M. (2013). Measuring treatment motivation in secure juvenile facilities. *International Journal of Offender Therapy and Comparative Criminology*, *57*, 996-1008.

Van der Poel, A., Rutten, E., & Sondeijker, F. (2008). *Methode Jeugdzorgplus: Meer dan gesloten jeugdzorg* [Method Jeugdzorgplus: More than compulsory residential care]. Woerden, The Netherlands: Adviesbureau Van Montfoort.

Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2015). Genetic differential susceptibility on trial: Meta-analytic support from randomized controlled experiments. *Development and Psychopathology*, *27*, 151-162.

Vermaes, I. P., & Nijhof, K. S. (2014). Zijn jongeren in jeugdzorgplus anders dan jongeren in de open residentiële jeugdzorg? [Are juveniles in secured youth care different from juveniles in open residential youth care?]. *Orthopedagogiek: Onderzoek en Praktijk*, *53*, 33-46.

Vreugdenhil, C., Doreleijers, T. A., Vermeiren, R., Wouters, L. F., & Van den Brink, W. (2004). Psychiatric disorders in a representative sample of incarcerated boys in the Netherlands. *Journal of the American Academy of Child & Adolescent Psychiatry*, *43*, 97-104.

Weeland, J., Overbeek, G., Orobio, de, Castro, B., & Matthys, W. (2015). Underlying mechanisms of gene-environment interactions in externalizing behavior: A systematic review and search for theoretical mechanisms. *Clinical Child and Family Psychology Review*, *18*, 413-441.

Wheatley, M., Waine, J., Spence, K., & Hollin, C. R. (2004). Characteristics of 80 adolescents referred for secure inpatient care. *Clinical Psychology & Psychotherapy*, *11*, 83-89.

CHAPTER 5

Residential Group Climate and Antisocial Behavior: A Multilevel Meta-analysis[4]

[4] Source: Eltink, E. M. A., Roest, J. J., Van der Helm, G. H. P., Kuiper, C. H. Z. Nijhof, K. S., Vandevelde, S., Wissink I. B., Leipoldt, J. D., Stams, G. J. J. M., Knorth, E.J., & Harder, A. T. (2019). Safety First! Residential Group Climate and Antisocial Behavior: A Multilevel Meta-analysis. *Manuscript submitted for publication.*

Abstract

A multilevel meta-analysis was performed including 23 studies (293 effect sizes) on the relation between residential group climate and juvenile and adult antisocial behavior, including aggression and criminal recidivism. Results show a significant small-to-medium association (*r* = .179) between residential group climate and antisocial behavior, equivalent to a 20% reduction of antisocial behavior in all clients receiving care in a residential facility with a therapeutic group climate. Moderator analyses showed that experienced safety was most strongly related to antisocial behavior (medium effect size of *r* = .288) which amounts to a 33% reduction of antisocial behavior. We conclude that residential facilities should consider safety as a priority, and should involve clients in a positive process of change through the development of a therapeutic environment and delivery of evidence-based treatment, addressing their needs from the perspective of rehabilitation.

Introduction

Residential facilities that provide 24-hour therapeutic care include psychiatric hospitals, forensic residential facilities and open, semi-secure and secure residential care facilities for youth and adults with complex or special needs, such as clients with emotional and behavioral disorders and/or intellectual disabilities (Bowers et al., 2009; Dickens, Suesse, Snyman, & Picchioni, 2014; Knotter, Stams, Moonen, & Wissink, 2016; Van Dam, Nijhof, Veerman, Engels, Scholte, & Delsing , 2011; Van den Tillaart, Eltink, Stams, Van der Helm & Wissink, 2018). Four previously conducted meta-analyses showed that residential treatment may lead to positive outcomes even for the most vulnerable children (Strijbosch et al., 2015), adolescents (De Swart et al., 2012; Knorth, Harder, Zandberg & Kendrick, 2008), and adults (Yoon, Slade, & Fazel, 2017). Another meta-analysis supported the overall effectiveness of prison-based therapeutic communities for adults (Lees, Manning, & Rawlings, 2004). In addition, there is empirical evidence showing that residential rehabilitation programs can decrease re-offending rates among formerly incarcerated offenders (see e.g. Lipsey, 2009; Pompoco, Wooldredge, Lugo, Sullivan, & Latessa, 2017; Van Stam et al., 2014).

Many individuals who are placed in residential facilities have a history of antisocial behavior – broadly defined as behavior that psychically or psychologically harms others or their property, which shows lack of consideration for the well-being of others, or in the most severe cases violates the basic rights of others (Berger, 2003; Calkins & Keane, 2009; Stoff, Breiling, & Maser, 1997). Antisocial behavior emerges as (reactive or proactive) aggression, delinquent behavior and violence. Antisocial behavior may be reinforced by a number of negative environmental influences that are associated with residential placement itself, such as institutional repression, lack of autonomy, and deprivation of meaningful relationships with important others, such as attachment figures or natural mentors (DeLisi, Trulson, Marquart, Drury, & Kosloski, 2011; De Valk, 2018; Eltink et al., 2018; Gover, Mackenzie, & Armstrong, 2000; Jiang & Fisher-Giorlando, 2002; Van Dam et al., 2018). Notably, antisocial behavior of clients in residential care can have a negative effect on the relationships among clients and on the relationships between clients and staff, which are assumed to be core aspects of residential group climate (Harvey, 2005; Schubert, Mulvey, Loughran, & Losoya, 2012; Van der Helm, 2011; Van der Helm, Boekee, Stams, & Van der Laan, 2011).

Residential group climate

The literature on residential group climate has a long history. Clemmer (1940, p. 279) introduced the term ‘prisonization’, which he described as ‘the taking on, in greater or lesser degree, of the

mores, customs, and general culture of the penitentiary' by prisoners. Goffman (1961) considered residential facilities as total institutions, because all aspects of life take place within the residential facility. Activities follow a tight schedule and are imposed by formal rules to fulfill the aims of the facility, which results in a loss of the responsibilities of the residents and may lead to hospitalization and repression (Goffman, 1961). The imposed structure ensures that residents are manageable and adapt themselves to the standards of the facility (Foucault & Mailänder, 1975). Individuals are pressured to conform (see Merton & Merton, 1968). However, the pioneers of group-based residential youth care (Addams, 1910; Korczak, 1925/1992) in both Europe and North America rejected adult imposed regiments of discipline and control, and incorporated approaches of care and nurture in their service delivery (Maier, 1987; Polsky, Claster, & Goldberg, 1968; Redl, & Wineman, 1951).

The terminology to describe residential group climate is diverse (for an overview, see Tonkin, 2016), and ranges from 'social climate' (e.g., Langdon, Cosgrave, & Tranah, 2004; Schalast, Redies, Collins, Stacey, & Howells, 2008; Theunissen, 1986; Tonkin, 2016), 'ward atmosphere' (Moos, 1975), 'prison social climate' (Casey, Day, & Reynolds, 2016; Ross, Diamond, Liebling, & Saylor, 2008), 'therapeutic residential care' (Leipoldt, Harder, Kayed, Grietens, & Rimehaug, 2019; Whittaker, Del Valle & Holmes, 2015) to '(living) group climate' (Van der Helm, 2011). Therefore, Van der Helm, Kuiper and Stams (2018) developed a definition that summarizes the different descriptions of group climate from the perspective of therapeutic quality of residential treatment and rehabilitation, and they based their definition on Self Determination Theory (SDT) (Ryan & Deci, 2000). SDT assumes that the social environment has an impact on human motivation by its impact on (actual and perceived) competence, relatedness with others, and possibilities to experience or execute personal autonomy. They (Stams & Van der Helm, 2017; Van der Helm, Kuiper & Stams, 2018) defined residential group climate as 'the quality of the social- and physical environment in terms of the provision of sufficient and necessary conditions for physical and mental health, well-being, contact and personal growth of the residents, with respect for their human dignity and human rights as well as (if not restricted by judicial measures) their personal autonomy, aimed at recovery and successful participation in society' (p. 340).

Several dimensions of residential group climate emerge in scientific literature, of which seven frequently occur in empirical research on antisocial behavior. *Support* is the extent to which staff is supportive and responsive to residents' psychological needs, building and maintaining positive relationships with the residents (Bottoms, 2003; Camp, Gaes, Klein-Saffron, Daggett, & Saylor, 2002; Leipoldt et al., 2019; Ross et al., 2008). *Growth* refers to opportunities for learning

and giving meaning to the stay in the facility, and respect for autonomy (Moos, 1975; Moos & Houts, 1986; Wright & Boudouris, 1982). *Structure* is the control dimension, which concerns a predictable and consistent institutional order, with clear rules and regulations, and adequate supervision (e.g., Attar-Schwartz, 2013; Langdon et al., 2004; Leipoldt et al., 2019; Pinchover & Attar-Schwartz, 2014). *Safety* is the degree to which residents are protected against harm, threat, danger, and bullying from fellow-residents (Crewe, Liebling, & Hully, 2015; Leipoldt et al., 2019; Robinson, Craig, &Tonkin, 2018; Ross et al., 2008; Wright, 1985). *Justice* concerns fairness, respect for clients, humanity, and just procedures (Ross et al., 2008). *Atmosphere* concerns quality of relationships among the residents (Hoy & Woolfolk, 1990; Moos & Houts, 1968; Robinson et al., 2018). *Repression*, finally, has recently been defined in a scoping review as 'a transactional process between youth and authority figures, characterized by an authority figure intentionally acting in a way that harms the youth, or by an authority figure unlawfully or arbitrarily depriving the youth of liberty or autonomy' (De Valk, Kuiper, Van der Helm, Maas, & Stams, 2016, p. 205).

It can be derived from SDT and the definition of residential group climate provided by Van der Helm et al. (2018) that residential group climate should be considered *therapeutic* if residents and staff feel safe and justice prevails, repression is low or absent, structure and possibilities for (personal) growth are high, and staff-client relationships as well as relationships among clients themselves are rewarding and supportive. It can be assumed that a therapeutic group climate fosters (intrinsic) motivation in clients to work on a positive change, which results in resilience, prosocial behavior, and reduces the risk of antisocial behavior (Ryan & Deci, 2017; Van der Helm et al., 2018).

To date, there is accumulating empirical evidence for the relation between residential group climate and a number of factors possibly explaining the link between residential group climate and antisocial behavior, although studies are restricted to youth and were primarily conducted in The Netherlands and Germany by Van der Helm and others, limiting the generalizability of the findings. Moreover, in only one study mediation was statistically tested (Van der Helm, Stams, Van Genabeek & Van der Laan, 2012). Heynen, Van der Helm, Cima, Stams and Korebrits (2017) and Van der Helm, Stams, Van der Stel, Van Langen and Van der Laan (2912) found that therapeutic group climate was associated with higher levels of empathy in detained male (youth) offenders, which has been shown to be related to delinquent behavior in a meta-analysis by Van Langen, Wissink, Van Vugt, Van der Stouwe and Stams (2014). Van der Helm, Beunk, Stams and Van der Laan (2014) showed that therapeutic group climate was positively associated with active coping and treatment motivation among detained juvenile delinquents; a positive

longitudinal association between residential group climate and motivation of detained justice-involved youth was also found in Van der Helm et al. (2018). Also, Van der Helm et al. (2012b) showed that therapeutic group climate was positively associated with the Big Five personality factors openness and agreeableness, and buffered against aggression through its positive effect on emotional stability in detained youth. Finally, Eltink, Van der Helm, Wissink and Stams (2015) showed that therapeutic group climate was positively associated with a reduction of aggressiveness-related deficits in social information processing in detained youth.

Residential group climate and treatment outcomes

Research on residential group climate is accumulating (Leipoldt et al., 2019; Matisse, 2017; Schaftenaar, Van Outheusden, Stams, & Baart, 2018; Souverein, Van der Helm, & Stams, 2013; Tonkin, 2016; Whittaker et al., 2016). Therefore, Leipoldt et al. (2019) conducted a systematic review of the literature on determinants and outcomes of group (social) climate in therapeutic residential youth care in Western countries. They found a positive association between a therapeutic group climate and various outcomes. Effect sizes ranged from small to large and showed heterogeneity within and between studies due to the variation in the concepts and operationalizations of group climate. No attempt was made to compute overall mean effect sizes and subsequently conduct moderator analyses to explain heterogeneity in effects sizes within or between studies. It was concluded that residential youth care facilities should invest in a group climate that is supportive, structured and caring, providing youth with an environment that enables growth.

Robinson, Craig and Tonkin (2016) were the first to conduct a narrative review of the literature on group climate and aggression. They found that in most studies a therapeutic group climate was associated with less client aggression. However, in a number of studies no association was found. This discrepancy was explained by different facilities with differing populations, and the use of different group climate questionnaires and measures of aggression. Robinson et al. (2016) concluded that residential care facilities need to focus on supporting individual clients in managing their aggressive behavior as well as on establishing a therapeutic group climate in which clients feel safe and accepted in order to reduce aggressive behavior. In the past decade, an increasing number of empirical studies has been conducted on the relation between group climate and aggressive behavior.

Present study

The present study is the first meta-analysis to quantitatively integrate the extant empirical literature on the relation between residential group climate and juvenile and adult antisocial behavior, c.q. aggression and recidivism, by examining the strength of this relation, accounting for possible moderating effects of study characteristics (e.g., continent where the study was conducted, study design), sample characteristics (e.g., youth versus adults, type of facility), group climate dimensions (support, safety, structure, growth, justice, atmosphere, and institutional repression), and methodological moderators, such as informant of group climate (i.e., client, staff, or composite) and type of antisocial behavior (i.e., self-reported aggression, incidents, recidivism).

Method

Selection of studies

Studies were included in the meta-analysis if they met five criteria: (a) group climate had to be operationalized as social climate, (living) group climate, ward climate, residential climate, or therapeutic climate; (b) antisocial behavior had to be operationalized as aggression, recidivism, externalizing behavior or institutional misconduct; (c) studies had to report on the bivariate association between group climate and antisocial behavior, since multivariate results cannot be compared across studies (Lipsey &Wilson, 2001); (d) studies had to be conducted in a residential facility, and (e) studies had to be published in a peer-reviewed journal.

Studies were collected until June 2019 by using multiple search methods. First, we searched for articles, books, chapters, dissertations, reviews, and reports in the following electronic databases: PsychINFO, ERIC, and OVID Medline. Various terms related to social climate (e.g., group climate, living group climate, ward climate), externalizing behavior (e.g., aggres*, recidiv*) and residential treatment were combined (details on the search terms and syntax for each database are available on request). Next, manual searches were conducted by inspecting reference lists of articles and reviews in order to find relevant studies that were not included yet. Two researchers applied the search strategy independently of each other. The search yielded 453 reports of which 23 studies met the selection criteria. See Figure 1 for a PRISMA flowchart of the search process.

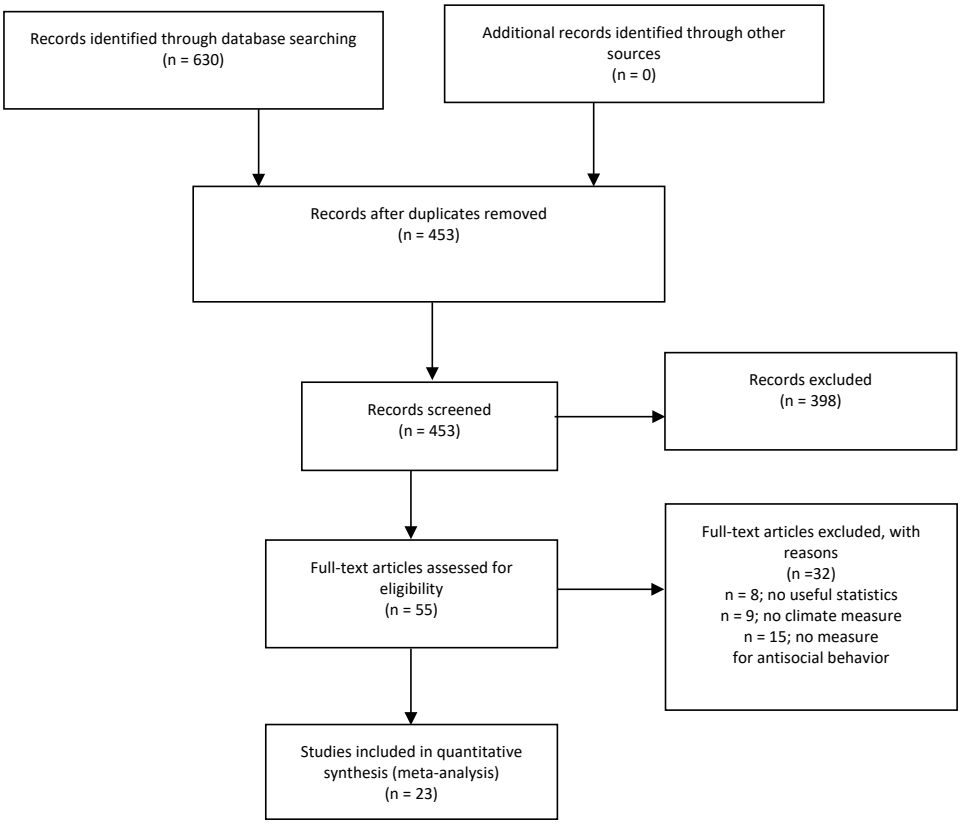

Figure 1. PRISMA Flow Chart of the Search Strategy and Identification of Studies

Coding the studies

A detailed coding system was used, based on guidelines proposed by Lipsey and Wilson (2001), to record all study characteristics that may potentially moderate the relation between residential group climate and antisocial behavior. The following study characteristics were described: study characteristics, sample characteristics, group climate characteristics, and methodological characteristics. Moderators taken into account were year of publication, the continent where the study was conducted (North America or Europe), journal impact factor, study design (cross-sectional or longitudinal), client age (e.g., youth or adults), type of facility (secure, semi-secure, open, mixed), gender (male, female, mixed), group climate dimensions (support, safety, structure, growth, justice, atmosphere, and institutional repression), group climate informant (client, staff, or composite score), group climate measure (ESSEN-CES, PGCI, MQPL, WAS, or other), type of group climate score (individual score, group score), antisocial behavior (i.e., self-reported aggression, incidents, delinquency), and whether studies used client self-report rating for both group climate

and aggressive behavior (same rater, different rater). The first author of this article coded the included studies according to the suggestions of Lipsey and Wilson (2001). Eight studies were double coded by the second author (range Cohen's kappa .67 – 1.00).

Analyses

For each of the studies, Pearson's *r* was calculated for the relation between residential group climate and antisocial behavior. Six studies reported on correlations between group climate and antisocial behavior at group level, based on averaged scores of climate and antisocial behavior. In these studies, the number of groups was used as the sample size of the study, since the group was the level of analysis.

Each correlation was transformed to Fisher's Z before combined effect sizes were calculated and transformed back into Pearson *r* after analyses for reporting and interpretation. Effect sizes were interpreted following Cohen's (1988) guidelines; *r* is a small effect when at least .10, *r* is a medium effect when at least .30, and *r* is a large effect when at least .50.

We checked for outliers by calculating standardized scores of effect sizes in order to identify standardized scores larger than 3.29 or smaller than −3.29 (Tabachnik & Fidell, 2013). No outliers were identified. The homogeneity of the combined, total effect size was tested with a z-test of the between study variance (total study variance divided by its standard error). If this z-test is significant, there is heterogeneity between studies. In case of significant heterogeneity, moderators may account for differences between studies, and it is imperative to conduct moderator analyses. Categorical variables were turned into dichotomous dummy codes and continuous moderator variables were centered around their mean prior to conducting moderator analyses.

In most studies, more than one effect size could be calculated. We used a three-level random effects model to account for dependency of effect sizes within studies (Cheung, 2014; Van den Noortgate, López-López, Marín-Martínez, & Sánchez-Meca, 2013, 2014), with three sources of variance: sampling variance of the observed effect sizes (level 1), variance between effect sizes from the same study (level 2), and variance between studies (level 3). An important advantage of this three-level approach to meta-analysis is that (dependent) effect sizes from the same study can be included in the analysis, increasing statistical power compared to traditional approaches to meta-analysis.

We used the function "rma.mv" of the metafor package (Viechtbauer, 2010, 2015) in the R environment (version 3.5.2; R Core Team, 2015). The R syntax and protocol (Assink & Wibbelink,

2016) were based on procedures outlined by Van den Noortgate et al. (2013, 2014), modeling three sources of variance. The *t*-distribution was used for testing individual regression coefficients of the meta-analytic models and for calculating the corresponding confidence intervals (Knapp & Hartung, 2003). This approach accounts for uncertainty of the amount of residual variance, which leads to a more accurate estimate of the standard errors and fewer type-I errors.

When models were extended with categorical moderators consisting of three or more categories, the omnibus test of the null hypothesis that all group mean effect sizes are equal, followed an *F*-distribution. To determine whether the variance between effect sizes from the same study (level 2), and the variance between studies (level 3) were significant, two separate one-tailed log-likelihood-ratio-tests were performed in which the deviance of the full model was compared to the deviance of a model excluding one of the variance parameters. The sampling variance of observed effect sizes (level 1) was estimated by using the formula of Cheung (2014). All model parameters were estimated using the restricted maximum likelihood estimation method. The log-likelihood-ratio-tests were performed one-tailed and all other tests were performed two-tailed. We considered *p*-values < .05 as statistically significant.

Publication Bias/ File drawer problem

Studies reporting significant associations are more likely to be published than studies with non-significant results (Dickersin, 2005), which can lead to an overestimation of the true effect size (Borenstein, Hedges, Higgins, & Rothstein, 2009), referred to as the 'file drawer problem' or 'publication bias' (Rosenthal, 1979). We performed a so-called 'trim and fill procedure' (Duval & Tweedie, 2000), which tests whether effect sizes are missing on the left side of the distribution, indicating that the overall estimate found in the meta-analysis is an overestimation of the true effect. The trim and fill procedure could also indicate missing studies on the right side of the distribution, indicating that the overall estimate is an underestimation of the true effect. These analyses were carried out by drawing a trim and fill plot in R, using the function "trimfill" of the metafor package (Viechtbauer, 2015). For these analyses, all available effect sizes were used.

Results

Descriptive Statistics of the Study Sample

Table 1 shows the characteristics of the study sample included in the meta-analysis. The sample contains a total of 23 studies, including 293 effect sizes. The studies reporting on the residential group climate-antisocial behavior association included a total of *N* = 29,871 clients, and *N* = 1,234

staff; two of the studies only reported number of wards included (Bowers, 2009; Lanza, Kayne, Hicks, & Milner, 1994). The mean sample size per study was 183 (*SD* = 253.82).

Relation Between Group Climate and Antisocial Behavior

The overall mean effect size between residential group climate and antisocial behavior was significant (r = .179, 95% CI = .140, .217, p < .001). This indicates that a more therapeutic group climate is associated with less antisocial behavior.

Moderator analyses revealed a significant moderating effect for type of climate dimension, indicating a stronger effect (r = .288) for 'Safety' compared to other group climate dimensions. No significant moderating effect was found for other variables. A trend toward significance was found for age, indicating that the relation between group climate and aggressive behavior was stronger for adults than for youth. All moderator analyses are displayed in Table 2.

Table 1. *Summary of Studies Included in the Meta-Analysis*

Study	Outcome	Instrument Self-reported Aggression	Instrument Group Climate	Population	Region	Informant Group Climate	*N*	Study Design	Type facility	Effect Size[b]
Auty & Liebling (2019)	Recidivism	-	MQPL	Adult	Europe	Client	24,508	Longitudinal	Closed, Semi-Closed	.23
Beijersbergen et al. (2015)	Aggression & incidents	-	MQPL, DIS	Adult	Europe	Client	806	Longitudinal	Closed	.16
Beijersbergen et al. (2016)	Recidivism	-	MQPL, DIS	Adult	Europe	Client	1,241	Longitudinal	Closed	.09
Bowers et al. (2009)	Incidents	OAS	WAS	Adult	Europe	Staff	136[a]	Crosssectional	Open	.27
De Decker et al. (2017)	Incidents	MOAS	PGCI	Youth	Europe	Client	24	Longitudinal	Semi-Closed	.15
Dickens et al. (2014)	Incidents	OAS	Essen-CES	Adult	Europe	Client	63	Crossectional	Semi-Closed	.01
Eggert et al. (2014)	Incidents	-	Essen-CES	Adult	North America	Staff	353	Crosssectional	Closed, Semi-Closed	.30
						Client	526			
Eltink et al. (2018)	Aggression	BDHI-D	PGCI	Youth	Europe	Client	198	Longitudinal	Open, Closed & Semi-Closed	.18
Heynen et al. (2016)	Aggression	RPQ	PGCI	Youth	Europe	Client	156	Crossectional	Closed	.05
Lanza et al. (1994)	Incidents	-	WAS	Adult	North America	Staff	6[a]	Crosssectional	Open	.33
						Client				
Long et al. (2010)	Incidents	OAS	Essen-CES	Adult	Europe	Staff	80	Crosssectional	Semi-Closed	.26
						Client	65			
Mathys et al. (2013)	Aggression	QCGCR	QCGCR	Youth	North America	Client	153	Crosssectional	Open	.15
Puzzo et al. (2018)	Incidents	-	Essen-CES	Adult	Europe	Staff	69	Crosssectional	Closed, Semi-Closed	.21
						Client	42			
Reisig & Mesko (2009)	Aggression &	-	-	Adult	Europe	Client	103	Crossectional	Closed	.25

	incidents									
Ros et al. (2013)	Incidents	-	PGCI	Adult	Europe	Client	72	Longitudinal	Closed	.18
Schalast et al. (2008)	Incidents		Essen-CES	Adult	Europe	Staff	333	Crosssectional	Closed	.15
						Client	327			
Scholte & Van der Ploeg (2000)	Incidents	YSR	-	Youth	Europe	Client	200	Longitudinal	Closed, Semi-Closed	.18
Schubert et al. (2012)	Recidivism	-	DoiE	Youth	North America	Client	519	Longitudinal	Closed	.02
Van den Tillaart et al. (2018)	Aggression & incidents	BDHI-D	PGCI	Youth	Europe	Client	159	Crosssectional	Open, Closed & Semi-Closed	.06
Tonkin et al. (2012)	Incidents	-	Essen-CES	Adult	Europe	Staff	399	Crossectional	Closed, Semi-Closed	.19
						Client	315			
Van der Helm et al. (2012)	Aggression	BDHI-D	PGCI	Youth	Europe	Client	59	Crosssectional	Closed	.19
Van der Helm et al. (2013)	Aggression	BDHI-D	PGCI	Youth	Europe	Client	128	Crosssectional	Closed	.30
Van der Laan et al. (2013)	Inicidents	-	Survey	Youth	Europe	Client	207	Crosssectional	Closed	.19

Note. BDHI-D = Burke Depression Hostility Index- Dutch; DoiE = Dimension Of Institutional Experience; MOAS = Modified Overt Aggression Scale ; ESSEN-CES = English Essen Climate Evaluation Schema; OAS = Overt Aggression Scale ; MQPL = Measurement of Quality of Prison Life ; DIS = Dutch Inmate Survey ; PGCI = Prison Group Climate Inventory; QCGCR = Questionnaire du Climat de Groupe en Centre de Réadaptation; RPQ = Reactive-Proactive Aggression Questionnaire ; WAS = Ward Atmosphere Scale.

[a] Sample sizes are based on the number of groups. [b] Mean effect sizes are based on the mean of all calculated effect sizes within a study.

Table 2. *Results of Moderator Analyses for the Association Between Group Climate and Antisocial Behavior*

Moderator	# Studies	# ES	β_0, Mean *r* (S.E.)	95% CI	β_1 (95% CI)	$F(df_1, df_2)$	*p*	σ^2_{level2}	σ^2_{level3}
Study Characteristics									
Impact Factor	23	289	.178 (0.021)***	.138, .217	0.014 (-0.047, 0.075)	$F(1, 291) = 0.196$	.659	.012***	.006***
Publication year	23	289	.178 (0.020)***	.139, .217	-0.006 (-0.015, 0.003)	$F(1, 291) = 1.738$	.188	.012***	.006***
Region									
Europe (RC)	18	220	.176 (0.024)***	.130, .221	-0.015 (-0.111, 0.081)	$F(1, 291) = 0.098$	.754	.012***	.006***
United States	5	73	.191 (0.043)***	.109, .270	0.022 (-0.081, 0.111)				
Design									
Cross-sectional (RC)	18	202	.191 (0.021)***	.150, .231	0.041 (-0.012, 0.093)	$F(1, 291) = 2.274$	.133	.012***	.005***
Longitudinal	8	91	.151 (0.028)***	.098, .203	-0.041 (-0.093, 0.012)				
Sample Characteristics									
Age Category									
Youth (RC)	10	176	.144 (0.026)***	.093, .195	-0.072 (-0.146, 0.002)	$F(1, 291) = 3.687$	.056	.012***	.004***
Adults	13	117	.214 (0.027)***	.163, .263	0.072 (-0.002, 0.146)				
Gender									
Mixed (RC)	18	247	.182 (0.024)***	.136, .227		$F(2, 290) = 0.131$	.877	.012***	.006***
Female	2	30	.195 (0.065)**	.069, .315	0.013 (-0.123, 0.150)				
Male	3	16	.154 (0.060)*	.036, .267	-0.029 (-0.157, 0.099)				
Type of facility									
Closed (RC)	11	123	.157 (0.025)***	.109, .205		$F(3, 289) = 1.856$	.137	.012***	.005***
Open	5	79	.144 (0.035)***	.077, .210	-0.013 (-0.086, 0.059)				
Semi-closed	5	49	.203 (0.034)***	.138, .267	0.048 (-0.022, 0.118)				
Mixed	6	42	.234 (0.041)***	.157, .309	0.080 (-0.015, 0.175)				
Climate Characteristics									
Dimension						$F(6, 284) = 2.528$	.021	.012***	.005***
Safety (RC)	9	19	.288 (0.038)***	.217, .354					

Support	19	70	.178 (0.026)***	.128, .227	-0.116 (-0.191, -0.040)**				
Growth	11	54	.134 (0.031)***	.074, .193	-0.161 (-0.245, 0.077)**				
Repression	11	47	.165 (0.030)***	.107, .223	-0.129 (-0.213, 0.044)***				
Atmosphere	16	52	.162 (0.029)***	.105, .217	-0.133 (-0.214, 0.052)**				
Structure	6	18	.174 (0.045)***	.087, .259	-0.120 (-0.224, 0.015)*				
Justice	7	31	.178 (0.033)***	.116, .238	-0.116 (-0.200, 0.031)**				
Type of climate measure						$F(4, 288) = 0.868$	.483	.012***	.005***
ESSEN-CES (RC)	6	28	.216 (0.045)***	.128, .299					
MQPL	3	45	.178 (0.052)***	.078, .275	-0.039 (-0.175, 0.096)				
PGCI	7	140	.163 (0.034)***	.097, .227	-0.055 (-0.167, 0.056)				
WAS	2	23	.295 (0.089)***	.128, .445	0.085 (-0.111, 0.281)				
Other	6	57	.150 (0.040)***	.073, .225	-0.068 (-0.186, 0.050)				
Type of climate report									
Client report (RC)	18	257	.164 (0.021)***	.121, .203		$F(2, 290) = 1.684$	.188	.012***	.005***
Staff report	2	12	.264 (0.101)**	.071, .438	0.106 (-0.095, 0.308)				
Composite score	5	24	.238 (0.046)***	.153, .321	0.079 (-0.020, 0.178)				
Type of climate score									
Individual scores (RC)	17	238	.226 (0.044)***	.137, .303	0.056 (-0.042, 0.154)	$F(1, 291) = 1.259$	.263	.012***	.005***
Group scores	6	55	.168 (0.022)***	.125, .211	-0.056 (-0.154, 0.042)				
Aggression Characteristics									
Type of antisocial behavior									
Self-reported aggression (RC)	10	150	.211 (0.029)***	.152, .263		$F(2, 290) = 1.077$	.342	.012***	.007***
Incidents	13	114	.162 (0.027)***	.109, .213	-0.048 (-0.116, 0.020)				
Recidivism	3	29	.175 (0.047)***	.084, .265	-0.033 (-0.127, 0.060)				
Rater group climate / aggression									
Same rater (RC)	9	140	.164 (0.024)***	.118, .210	-0.042 (-0.102, 0.017)	$F(1, 291) = 1.991$	.159	.012***	.006***
Different rater	17	153	.206 (0.029)***	.151, .259	0.042 (-0.017, 0.102)				

Note. CI = confidence interval; ES = effect size; RC = reference category; σ^2_{level2} = variance between effect sizes (within studies); σ^2_{level3} = variance between effect sizes (between studies).

* $p < .05$ ** $p < .01$ *** $p < .001$

Publication Bias

Results of the trim-and-fill procedures (Figure 2) indicated that no effect sizes were imputed on the left side of the plot, suggesting that there was no indication of publication bias. Two effect sizes were imputed on the right side of the plot. However, the effect size after trim and fill did not significantly differ from the effect size before trim and fill.

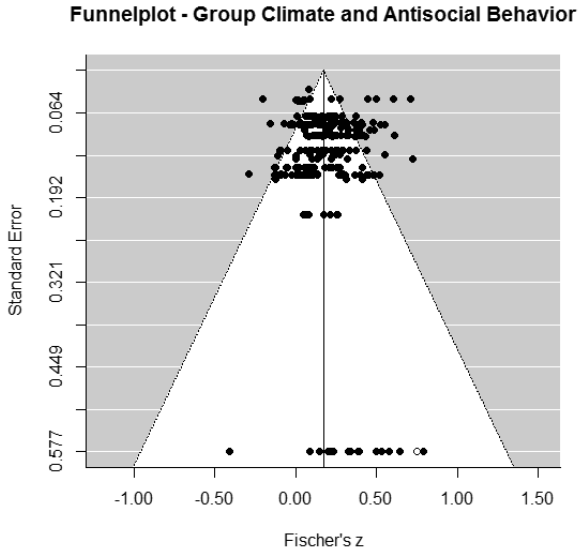

Figure 2. Trim and fill plot

Discussion

The purpose of the present meta-analysis was to examine the relation between residential group climate and antisocial behavior of youth and adults. Results showed a significant small-to-medium association between residential group climate and antisocial behavior of r = .179, equivalent to a 20% reduction of antisocial behavior in clients receiving care in a residential facility with a therapeutic group climate. Moderator analyses showed that experienced safety was about two times more strongly, positively related to antisocial behavior than the other dimensions of residential group climate, showing a significant and medium effect size of r = .288, which amounts to a 33% reduction of antisocial behavior. A first plausible explanation might be that experienced safety, more than any other group climate dimension, directly concerns the environmental protection from antisocial behavior. Moreover, effective treatment of antisocial behavior seems unlikely if clients are not protected against antisocial behavior of others, which may even result in (second-dary) traumatization.

Finally, there was a trend showing that the association between residential group climate and antisocial behavior was somewhat stronger in adults (r = .214) than in youth (r = .144).

No moderating effects were found for sample characteristics or methodological characteristics. We found large heterogeneity within (49%) and between (22%) studies, while only 17% of the between study variability could be explained by the dimension of group climate. Not only the terminology, definitions, and dimensions of group climate show considerable differences among studies (Boone, Althoff, & Koenraadt, 2016; Leipoldt et al., 2019; Tonkin, 2016; Van der Helm, Stams, & Van der Laan, 2011), but also very limited information on the residential facilities was provided, such as staff-resident ratio, group size, level of security, length of stay, information on same or mixed gender group, physical design of the environment, education level and skills quality of staff members, and organizational management. Also, no information was provided on group working methods within the residential facility, how treatment was delivered, if treatment was carried out as intended, and whether these treatments were evidence-based. It is possible that these and other factors, not measured in the included studies on group climate and antisocial behavior in the present study sample, explain heterogeneity in effect sizes both within and between studies.

The overall small to medium association between residential group climate and antisocial behavior of clients, though modest, is an important finding given that recent research shows that antisocial behavior is rather stable in detained adolescents (Eltink et al., 2018). Notably, individuals who are placed in residential facilities, in particular for reasons of delinquent behavior, tend to show high (life course) stability in antisocial behavior (Moffitt 1993; Tremblay, 2010; Tremblay et al., 2004), which might be difficult to change due to a relatively strong genetic basis of antisocial behavior (Niv, Tuvblad, Raine, & Baker, 2013), and low genetic susceptibility to (positive) environmental influences (Van IJzendoorn, & Bakermans-Kranenburg, 2015). On the other hand, results from genetic research examining direct genetic effects on antisocial behavior should be qualified by studies on gene-environment interaction, and recent research on epigenetics, showing that the same genes that increase the risk for antisocial behavior in adverse (i.e., stressful and traumatic) environments may decrease the propensity for antisocial behavior in positive environments through increased neuro-physiological sensitivity to positive social experiences, including treatment (Iofrida, Palumbo, & Pellegrini, 2014; Palumbo, Mariotte, Iofrida, & Pellegrini, 2018). Moreover, an accumulation of both static and dynamic risk factors for antisocial behavior has been shown to predict persistent antisocial behavior more than genetic or neuro-physiological deficiencies (Assink et al., 2015; Fairchild et al., 2013).

From this viewpoint, our study findings are important, since a therapeutic group climate may not only increase the susceptibility to treatment from an epigenetic perspective, but may also reduce the detrimental effects of stress and (possible) secondary traumatization, in particular with regard to experienced safety, showing the strongest association with clients' antisocial behavior. However, it should be acknowledged that residential group climate is only one correlate of antisocial behavior, which is multi-causally determined. It is therefore unlikely that residential group climate alone could result in positive (enduring) effects on antisocial behavior, which probably needs intensive evidence-based treatment (Andrews & Bonta, 2010; De Swart et al., 2012).

Given the multi-causal determination of antisocial behavior and the need to treat antisocial behavior within residential facilities, it cannot be ruled out that the modest association that was found between group climate and antisocial behavior is spurious, that is, affected by a third unmeasured variable responsible for the established association. For instance, it is possible that clients in residential facilities with a positive therapeutic group climate received evidence-based treatment that was successful in decreasing antisocial behavior, although the prevalence of health service utilization in detained youth (White et al., 2019) and adults (Persson, Belfrage, & Kristiansson, 2017) tends to be low. Examples of evidence-based treatment that may successfully reduce antisocial behavior are EQUIP (Van Stam et al., 2014), Responsive Aggression Regulation Therapy (Re-ART; Hoogsteder, Stams, Schippers, & Bonnes, 2018), or Trauma Focused-Cognitive Behavioral Therapy (TF-CBT) (Guttermann et al., 2016) and EMDR (Fleurkens, Hendriks, & Van Minnen, 2018) given the established association between trauma and antisocial behavior (Bernhard, Martinelli, Ackermann, Saure, & Freitag, 2018), and the overrepresentation of clients having experienced maltreatment in delinquent samples (Asscher, Van der Put, & Stams, 2015). Moreover, several other factors may affect the relation between group climate and aggression, such as education, training and support of staff, working climate, group size, large or small scale of the facility, and policies with respect to aggression incidents and seclusion (Molleman & Van Ginneken, 2015; Van Gink et al., 2018). For example, it is plausible to suggest that well-trained staff may have a positive effect on both residential group climate and reduction of antisocial behavior in detainees, explaining the (possibly spurious) association between a therapeutic group climate and antisocial behavior.

In fact, (quasi-)experimental research is needed to examine whether residential group climate is a causal factor in the treatment of antisocial behavior. To date, there is only preliminary evidence showing that residential group climate may be a causal factor in the reduction of

antisocial behavior in clients. Barton and Mackin (2012) and Schaftenaar et al. (2018) carried out quasi-experimental studies showing that a positive change in group climate did positively affect criminal recidivism in respectively youth and adult offenders. However, both studies had several methodological shortcomings, limiting the causal interpretation of the results. Moreover, to our knowledge, no studies have been conducted that examined residential group climate as a moderator of treatment effects.

Finally, age proved to show a trend, indicating that the association between residential group climate and antisocial behavior was somewhat stronger in adults than in youth. Given that most studies on youth were carried out in samples of youth, some explanation for this result may be found in a study by Spruit, Van der Put, Gubbels and Bindels (2017), showing that dynamic (i.e., changeable) risk factors for antisocial behavior, which are targets for judicial interventions, were more strongly related to criminal recidivism in adults than in youth. It is therefore plausible to suggest that adults are more susceptible to aspects of the residential therapeutic group environment than youth.

A general limitation of the present meta-analysis is that it cannot account for all underlying differences between studies by means of moderator analyses. There are also some technical limitations of this meta-analysis that should be noted. To preserve some minimum level of study quality we only included published studies, which might increase the risk of publication bias. We used a trim and fill procedure to test for publication bias, and results suggested that there was no indication of publication bias. A second limitation is that a large number of potential moderators could not be assessed due to insufficient information in the studies. Third, no studies were available which 'measure' group climate in terms of observations, instead of perception, that would make triangulation possible.

Conclusion

The present meta-analysis shows that the association between residential group climate and antisocial behavior is small to moderate. Research shows that clients' antisocial behavior is difficult to change, so even a small positive influence might be of great value, in particular because of the high personal and societal costs of antisocial behavior (Vermeulen, Jansen, Knorth, Buskens, & Reijneveld, 2017). Future research should examine residential group climate as a moderator of treatment effectiveness, and test the possible causal influence of group climate on antisocial behavior through (quasi-)experimental research.

For now, residential facilities should consider safety on the wards or groups as a priority, by involving clients in a positive process of change through establishing a therapeutic environment, in combination with delivery of evidence-based treatment that targets the needs of clients from a rehabilitative perspective.

References

Studies included in the meta-analysis are denoted with an asterisk (*)

Addams, J. (1910). *Twenty years at Hull House*. New York, NY: Macmillan.

Andrews, D., & Bonta, J. (Eds.). (2010). *The psychology of criminal conduct* (5th ed.). New Providence, NJ: Matthew Bender & Company, Inc., LexisNexis Group.

Asscher, J. J., Van der Put, C. E., & Stams, G. J. J. M. (2015). Gender differences in the association between child maltreatment and adolescent offending. *Journal of Family Violence, 30, 215-225*. https://doi.org/10.1007/s10896-014-9668-4

Assink, M., Van der Put, C. E., Hoeve, M., De Vries, S. L. A., Stams, G. J. J. M., & Oort, F. J. (2015). Risk factors for persistent delinquent behavior among juveniles: A meta-analytic review. *Clinical Psychology Review, 42,* 47-61.

Assink, M., & Wibbelink, C. M. (2016). Fitting three-level meta-analytic models in R: A step-by-step tutorial. *The Quantitative Methods for Psychology, 12,* 154-174. https://doi.org/10.20982/tqmp.12.3.p154

Attar-Schwartz, S. (2013). Runaway behavior among adolescents in residential care: The role of personal characteristics, victimization experiences while in care, social climate, and institutional factors. *Children and Youth Services Review*, *35*(2), 258–267. https://doi.org/10.1016/j.childyouth.2012.11.005

*Auty, K., & Liebling, A. (2019). Exploring the relationship between prison social climate and reoffending. *Justice Quarterly*, 1–24. https://doi.org/10.1080/07418825.2018.1538421

Barton, W., & Mackin, J. (2012). Towards a strength-based juvenile correctional facility: Sustainability and effects of an institutional transformation. *Journal of Offender Rehabilitation, 51*(7), 435–452. https://doi.org/10.1080/10509674.2012.700688

*Beijersbergen, K., Dirkzwager, A., Eichelsheim, V., Van Der Laan, P., & Nieuwbeerta, P. (2015). Procedural justice, anger, and prisoners' misconduct: A longitudinal study. *Criminal Justice and Behavior*, *42*(2), 196–218. https://doi.org/10.1177/0093854814550710

*Beijersbergen, K., Dirkzwager, A., Nieuwbeerta, P., & Holtfreter, K. (2016). Reoffending after release: Does procedural justice during imprisonment matter? *Criminal Justice and Behavior*, *43*(1), 63–82. https://doi.org/10.1177/0093854815609643

Berger K. S. (2003). *The developing person through childhood and adolescence* (6th ed.). Worth Publishers.

Bernhard, A., Martinelli, A., Ackermann, K., Saure, D., & Freitag, C. (2018). Association of trauma, Posttraumatic Stress Disorder and Conduct Disorder: A systematic review and meta-analysis. *Neuroscience and Biobehavioral Reviews, 91,* 153–169. https://doi.org/10.1016/j.neubiorev.2016.12.019

Boone, M., Althoff, M., Koenraadt, F. (2016). *Het leefklimaat in justitiële inrichtingen.* Den Haag: Boom criminologie.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to Meta-Analysis.* Chichester, West Sussex, UK: Wiley.

*Bowers, L., Allan, T., Simpson, A., Jones, J., Van der Merwe, M., & Jeffery, D. (2009). Identifying key factors associated with aggression on acute inpatient psychiatric wards. *Issues in Mental Health Nursing*, *30*(4), 260-271. https://doi.org/10.1080/01612840802710829

Bottoms, A. E. (2003). Some sociological reflections on restorative justice. In A. Von Hirsch, J. Roberts, A. E. Bottoms, K. Roach, & M. Schiff (Eds.). *Restorative justice and criminal justice: competing or reconcilable paradigms?* (pp.79-113). Oxford, Hart Publishing.

Bronfenbrenner, U. (1979). *Ecology of human development*. Cambridge, MA: Harvard University Press.

Camp, S. D., Gaes, G. G., Klein-Saffron, J., Daggett, D. M., & Saylor, W. G. (2002) Using inmate survey data in assessing prison performance: A case study comparing private and public prisons. *Criminal Justice Review, 27*(1), 26-51

Calkins S. D., & Keane, S. P. (2009). Developmental origins of early antisocial behavior, *Development and Psychopathology, 21*(4): 1095–109. https://doi.org/10.1017/S095457940999006X

Casey, S., Day, A., & Reynolds, J. (2016). The influence of incarceration length and protection status on perceptions of prison social climate. *Criminal Justice and Behavior, 43*(2), 285–296. https://doi.org/10.1177/0093854815603747

Cheung, M. W. L. (2014). Modeling dependent effect sizes with three-level meta-analyses: A structural equation modeling approach. *Psychological Methods, 19,* 211-229. https://doi.org/10.1037/a0032968

Clemmer, D. (1940). *The prison community.* New York: Christopher.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Crewe, B., Liebling, A., & Hulley, S. (2015). Staff-prisoner relationships, staff professionalism, and the use of authority in public-and private-sector prisons. *Law & Social Inquiry*, *40*(2), 309-

344. https://doi.org/10.1111/lsi.12093

Dack, C., Ross, J., Papadopoulos, C., Stewart, D., & Bowers, L. (2013). A review and meta-analysis of the patient factors associated with psychiatric in-patient aggression. *Acta Psychiatrica Scandinavica*, *127*(4), 255-268. https://doi.org/10.1111/acps.12053

*De Decker, A., Lemmens, L., Van der Helm, P., Bruckers, L., Molenberghs, G., & Tremmery, B. (2017). The relation between aggression and the living group climate in a forensic treatment unit for adolescents: A pilot study. *International Journal of Offender Therapy and Comparative Criminology*, *62,* 1821-1837. https://doi.org/10.1177/0306624X17712347

DeLisi, M., Trulson, C. R., Marquart, J. W., Drury, A. J., & Kosloski, A. E. (2011). Inside the prison black box: Toward a life course importation model of inmate behavior. *International Journal of Offender Therapy and Comparative Criminology, 55*(8), 1186-1207.

De Swart, J. J. W., Van den Broek, H., Stams, G. J. J. M., Asscher, J. J., Van der Laan, P. H., Holsbrink-Engels, G. A., & Van der Helm, G. H. P. (2012). The effectiveness of institutional youth care over the past three decades: A meta-analysis. *Children and Youth Services Review, 34,* 1818-1824. https://doi.org/10.1016/j.childyouth.2012.05.015

De Valk, S., Kuiper, C., Van der Helm, G. H. P., Maas, A. J. J. A., & Stams, G. J. J. M. (2016). Repression in residential youth care: A scoping review. *Adolescent Research Review*, *1*(3), 195-216.

*Dickens, G. L., Suesse, M., Snyman, P., & Picchioni, M. (2014). Associations between ward climate and patient characteristics in a secure forensic mental health service. *The Journal of Forensic Psychiatry & Psychology*, *25*(2), 195-211.

Dickersin, K. (2005). Publication bias: recognizing the problem, understanding its origins and scope, and preventing harm. In: H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.). *Publication Bias in Meta-Analysis—Prevention, Assessment and Adjustments.* Chichester, UK: J Wiley.

Duval, S., & Tweedie, R. (2000). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics, 56*, 455-463. https://doi.org/10.1111/j.0006341x.2000.00455.x

*Eggert, J., Kelly, S., Margiotta, D., Hegvik, D., Vaher, K., & Kaya, R. (2014). Person–environment interaction in a new secure forensic state psychiatric hospital. *Behavioral Sciences & the Law*, *32*(4), 527–538. https://doi.org/10.1002/bsl.2127

*Eltink, E. M. A., Ten Hoeve, J., De Jongh, T., Van der Helm, G. H. P., Wissink, I. B., & Stams, G. J. J. M. (2018). Stability and change of adolescents' aggressive behavior in residential youth care, *Child & youth care forum, 47,* 199-217. https://doi.org/10.1007/s10566-017-9425-y

Eltink, E., Van der Helm, G. H. P., Wissink, I. B., & Stams, G. J. J. M. (2015). The relation between living group climate and reactions to social problem situations in detained adolescents: "I stabbed him because he looked mean at me". *International Journal of Forensic Mental Health, 14,* 101-109. https://doi.org/10.1080/14999013.2015.1033110

Fairchild, G., Van Goozen, S. H., Calder, A. J., & Goodyer, I. M. (2013). *Research Review: Evaluating and reformulating the developmental taxonomic theory of antisocial behaviour. Journal of Child Psychology and Psychiatry, and Allied Disciplines, 54,* 924-940. https://doi.org/10.1111/jcpp.12102

Fleurkens, P., Hendriks, L., & Van Minnen, A. (2018). Eye Movement Desensitization and Reprocessing (EMDR) in a forensic patient with Posttraumatic Stress Disorder (PTSD) resulting from homicide: a case study. *The Journal of Forensic Psychiatry & Psychology, 29*(6), 901–913. https://doi.org/10.1080/14789949.2018.1459786

Foucault, M., & Mailänder, E. (1975). *Surveiller et punir* (Vol. 225). na.

Gharabaghi, K., & Phelan, J. (2011). Beyond control: Staff perceptions of accountability for children and youth in residential group care. *Residential Treatment for Children & Youth*, *28*(1), 75-90.

Goffman, E. (1961). *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates*. Dubledzay.

Gover, A. R., Mackenzie, D. L., & Armstrong, G. S. (2000). Importation and deprivation explanations of juveniles' adjustment to correctional facilities. *International Journal of Offender Therapy and Comparative Criminology*, *44*(4), 450-467.

Guttermann, J., Schreiber, F., Matulis, S., Schwartzkopff, L., Deppe, J., & Steil, R. (2016). Psychological treatments for symptoms of Posttraumatic Stress Disorder in children, adolescents, and young adults: a meta-analysis. *Clinical Child and Family Psychology Review, 19*, 77-93. https://doi.org/10.1007/s10567-016-0202-5

Harvey, J. (2005). *Young men in prison. Surviving and adapting to life inside*. Cullompton, UK: Willan

*Heynen, E., Van der Helm, G. H. P., Cima, M., Stams, G. J. J. M., & Korebrits, A. (2017). The relation between living group climate, aggression, and callous-unemotional traits in delinquent boys in detention. *International Journal of Offender Therapy and Comparative Criminology*, *61*(15), 1701–1718. https://doi.org/10.1177/0306624X16630543

Hoogsteder, L., Stams, G. J. J. M., Schippers, E. E., & Bonnes, D. (2018). Responsive aggression regulation therapy (Re-ART): An evaluation study in a Dutch juvenile justice institution in

terms of recidivism. *International Journal of Offender Therapy and Comparative Criminology, 62,* 4403-4424. https://doi.org/10.1177/0306624X18761267

Hoy, W. K., & Woolfolk, A. E. (1990). Socialization of student teachers. *American Educational Research Journal*, *27*(2), 279-300.

Huefner, J., & Ringle, J. (2012). Examination of negative peer contagion in a residential care institution. *Journal of Child and Family Studies*, *21*(5), 807–815. https://doi.org/10.1007/s10826-011-9540-6

Iofrida, C., Palumbo, S., & Pellegrini, S. (2014). Molecular genetics and antisocial behavior: where do we stand? *Experimental Biology and Medicine, 239,* 1514–1523. https://doi.org/10.1177/1535370214529508

Iozzino, L., Ferrari, C., Large, M., Nielssen, O., & De Girolamo, G. (2015). Prevalence and risk factors of violence by psychiatric acute inpatients: a systematic review and meta-analysis. *PLoS One*, *10*(6), e0128536. https://doi.org/10.1371/journal.pone.0128536

Jiang, S., & Fisher-Giorlando, M. (2002). Inmate misconduct: A test of the deprivation, importation, and situational models. *The Prison Journal*, *82*(3), 335-358. https://doi.org/10.1177/0032885502082003003

Knapp, G., & Hartung, J. (2003). Improved tests for a random effects meta-regression with a single covariate. *Statistics in Medicine, 22,* 2693-2710. Doi:10.1002/sim.1482

Knotter, M. H., Stams, G. J. J. M., Moonen, X. M. H., & Wissink, I. B. (2016). Correlates of direct care staffs' attitudes towards aggression of clients with intellectual disabilities. *Research in developmental disabilities*, *59*, 294-305. https://doi.org/10.1016/j.ridd.2016.09.008

Korczak, J. (1925/1992). *When I am little again and the child's right to respect*. New York, NY: University Press of America.

Langdon, P. E., Cosgrave, N., & Tranah, T. (2004). Social climate within an adolescent medium-secure facility. *International Journal of Offender Therapy and Comparative Criminology*, *48*(4), 504-515. https://doi.org/10.1177/0306624X03261559

*Lanza, M. L., Kayne, H. L., Hicks, C., & Milner, J. (1994). Environmental characteristics related to patient assault. *Issues in Mental Health Nursing*, *15*(3), 319-335.

Lees, J., Manning, N., & Rawlings, B. (2004). A culture of enquiry: Research evidence and the therapeutic community. *Psychiatric Quarterly*, *75*(3), 279-294.

Leipoldt, J. D., Harder, A. T., Kayed, N. S., Grietens, H., & Rimehaug, T. (2019). Determinants and outcomes of social climate in therapeutic residential youth care: A systematic review. *Children and Youth Services Review*, *99*, 429-440.

https://doi.org/10.1016/j.childyouth.2019.02.010

Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims and offenders*, *4*(2), 124-147.

Lipsey, M. W., Howell, J. C., Kelly, M. R., Chapman, G., & Carver, D. (2010). *Improving the effectiveness of juvenile justice programs: A new perspective on evidence-based practice.* Washington, DC: Center for Juvenile Justice Reform

Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Sage Publications, Inc.

*Long, C. G., Anagnostakis, K., Fox, E., Silaule, P., Somers, J., West, R., & Webster, A. (2011). Social climate along the pathway of care in women's secure mental health service: Variation with level of security, patient motivation, therapeutic alliance and level of disturbance. *Criminal Behaviour and Mental Health*, *21*(3), 202-214.

Maier, H. W. (1987). *Developmental group care of children and youth: Concepts and practice*. New York, NY: Haworth Press.

*Mathys, C., Lanctot, N., & Touchette, L. (2013). Construct validity and confirmatory factor analysis of a group climate measure for girls in residential care service: Real life intervention through three major dimensions. *European Review Of Applied Psychology- Revue Européenne de Psychologie Appliquée 63,* 109–119. https://doi.org/10.1016/j.erap.2012.11.001

Merton, R. K., & Merton, R. C. (1968). *Social theory and social structure*. Simon and Schuster.

Moffitt, T. E. (1993). A developmental taxonomy. *Psychological review, 100*(4), 674-701.

Molleman, T., & van Ginneken, E. (2015). A multilevel analysis of the relationship between cell sharing, staff–prisoner relationships, and prisoners' perceptions of prison quality. *International Journal of Offender Therapy and Comparative Criminology, 59*(10), 1029–1046. https://doi.org/10.1177/0306624X14525912

Moos, R.H. (1975). *Evaluating correctional and community institutions.* New York: Wiley-Interscience.

Moos, R. H., & Houts, P. (1968). Assessment of the social atmospheres of psychiatric wards. *Journal of Abnormal Psychology*, *73*(6), 595–604. https://doi.org/10.1037/h0026600

Niv, S., Tuvblad, C., Raine, A., & Baker, L. (2013). Aggression and rule-breaking: Heritability and stability of antisocial behavior problems in childhood and adolescence. *Journal of Criminal Justice, 41*(5), 285–291. https://doi.org/10.1016/j.jcrimjus.2013.06.014

Palumbo, S., Mariotti, V., Iofrida, C., & Pellegrini, S. (2018) Genes and aggressive behavior: Epigenetic mechanisms underlying individual susceptibility to aversive environments.

Frontiers in Behavioral Neuroscience, 12:117. https://doi.org/10.3389/fnbeh.2018.00117

Persson, M., Belfrage, H., & Kristiansson, M. (2017). Violent victimization and health service utilization in a forensic psychiatric context: a comparison between offenders with mental disorders and matched controls. *BMC Psychiatry 17.* https://doi.org/10.1186/s12888-017-1251-0

Polsky, H., Claster, D., & Goldberg, C. (1968). *The dynamics of residential treatment : a social system analysis.* Chapel Hill: University of North Carolina Press.

Pompoco, A., Wooldredge, J., Lugo, M., Sullivan, C., & Latessa, E. J. (2017). Reducing inmate misconduct and prison returns with facility education programs. *Criminology & Public Policy*, *16*(2), 515-547.

Pinchover, S., & Attar-Schwartz, S. (2014). Institutional social climate and adjustment difficulties of adolescents in residential care: The mediating role of victimization by peers. *Children and Youth Services Review*, *44*, 393-399.

*Puzzo, I., Aldridge-Waddon, L., Bush, E., & Farr, C. (2018). The relationship between ward social climate, ward sense of community, and incidents of disruptive behavior: A study of a high secure psychiatric sample. *International Journal of Forensic Mental Health*, 1–11. https://doi.org/10.1080/14999013.2018.1532972

R Core Team (2017). *R: A language and environment for statistical computing.* R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/

Redl, F., & Wineman, D. (1951). *Children who hate: the disorganization and breakdown of behavior controls.* New York, NY, US: Free Press.

*Reisig, M., & Mesko, G. (2009). Procedural justice, legitimacy, and prisoner misconduct. *Psychology, Crime & Law*, *15*(1), 41–59. https://doi.org/10.1080/10683160802089768

*Ros, N., Van Der Helm, P., Wissink, I., Stams, G., & Schaftenaar, P. (2013). Institutional climate and aggression in a secure psychiatric institution. *The Journal of Forensic Psychiatry & Psychology*, *24*(6), 1–15. https://doi.org/10.1080/14789949.2013.848460

Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological bulletin*, *86*(3), 638.

Ross, M. W., Diamond, P. M., Liebling, A., & Saylor, W. G. (2008). Measurement of prison social climate: A comparison of an Inmate measure in England and the USA. *Punishment & Society, 10*, 447. https://doi.org/10.1177/1462474508095320

Robinson, J., Craig, L. A., & Tonkin, M. (2018). Perceptions of social climate and aggressive behavior

in forensic services: A systematic review. *Trauma, Violence, & Abuse*, *19*(4), 391-405. https://doi.org/10.1177/1524838016663936

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55(1), 68–78.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.

Schaftenaar, P., Van Outheusden, I., Stams, G. J. J. M., & Baart, A. (2018). Relational caring and contact after treatment. An evaluation study on criminal recidivism. *International journal of law and psychiatry*, *60*, 45-50. https://doi.org/10.1016/j.ijlp.2018.07.011

*Schalast, N., Redies, M., Collins, M., Stacey, J., & Howells, K. (2008). EssenCES, a short questionnaire for assessing the social climate of forensic psychiatric wards. *Criminal Behaviour and Mental Health*, *18*(1), 49-58. https://doi.org/10.1002/cbm.677

*Scholte, E., & Van Der Ploeg, J. (2000). Exploring factors governing successful residential treatment of youngsters with serious behavioural difficulties: Findings from a longitudinal study in Holland. *Childhood*, *7*(2), 129–153. https://doi.org/10.1177/0907568200007002002

*Schubert, C., Mulvey, E., Loughran, T., & Losoya, S. (2012). Perceptions of Institutional Experience and Community Outcomes for Serious Adolescent Offenders. *Criminal Justice and Behavior*, *39*(1), 71–93. https://doi.org/10.1177/0093854811426710

Shapiro, R. (2010). *The trauma treatment handbook: Protocols across the spectrum*. WW Norton & Company.

Souverein, F. A., Van der Helm, G. H. P., & Stams, G. J. J. M. (2013). 'Nothing works' in secure residential youth care?. *Children and Youth Services Review*, *35*(12), 1941-1945.

Spruit, A., Van der Put, C., Gubbels, J., & Bindels, A. (2017). Age differences in the severity, impact and relative importance of dynamic risk factors for recidivism. *Journal of Criminal Justice, 50,* 69–77. https://doi.org/10.1016/j.jcrimjus.2017.04.006

Stams, G. J. J. M., & Van der Helm, G. H. P. (2017). What works in residential programs for aggressive and violent youth?. *The Wiley handbook of violence and aggression*, 1-12.

Strijbosch, E. L. L., Huijs, J. A. M., Stams, G. J. J. M., Wissink, I. B., Van der Helm, G. H. P., De Swart, J. J. W., & Van der Veen, Z. (2015). The outcome of institutional youth care compared to non-institutional youth care for children of primary school age and early adolescence: A multilevel meta-analysis. *Children and Youth Services Review*, *58*, 208-218. https://doi.org/10.1016/j.childyouth.2015.09.018

Stoff, D. M., Breiling, J., & Maser, J. D. (1997). *Handbook of Antisocial Behavior.* New York: Wiley.

Tabachnik, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston: Allyn and Bacon.

Theunissen, H. L. A. (1986). *Het sociaal klimaat van de leefgroep* (Doctoral dissertation).

Tonkin, M. (2016). A review of questionnaire measures for assessing the social climate in prisons and forensic psychiatric hospitals. *International Journal of Offender Therapy and Comparative Criminology*, *60*(12), 1376-1405. https://doi.org/10.1177/0306624X15578834

*Tonkin, M., Howells, K., Ferguson, E., Clark, A., Newberry, M., & Schalast, N. (2012). Lost in translation? Psychometric properties and construct validity of the English Essen Climate Evaluation Schema (EssenCES) Social Climate questionnaire. *Psychological Assessment*, *24*(3), 573–580. https://doi.org/10.1037/a0026267

Tremblay, R. E. (2010). Developmental origins of disruptive behaviour problems: the 'original sin' hypothesis, epigenetics and their consequences for prevention. *Journal of child psychology and psychiatry, 51*(4), 341-367. https://doi.org/10.1111/j.1469-7610.2010.02211.x

Tremblay, R. E., Nagin, D. S., Séguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., et al. (2004). Physical aggression during early childhood: Trajectories and predictors. *Pediatrics, 114,* e43–e50.

Van Dam, C., Nijhof, K., Veerman, J., Engels, R., Scholte, R., & Delsing, M. (2011). Group care worker behavior and adolescents' internalizing and externalizing problems in compulsory residential care. *Residential Treatment For Children & Youth, 28*(3), 232-250. https://doi.org/10.1080/0886571X.2011.605050

Van Dam, L., Smit, D., Wildschut, B., Branje, S., Rhodes, J., Assink, M., & Stams, G. J. J. M. (2018). Does natural mentoring matter? A multilevel meta-analysis on the association between natural mentoring and youth outcomes. *American Journal of Community Psychology*, *62*(1-2), 203–220. https://doi.org/10.1002/ajcp.12248

Van den Noortgate, W., López-López, J. A., Marín-Martínez, F., & Sánchez-Meca, J. (2013). Three-level meta-analysis of dependent effect sizes. *Behavior Research Methods, 45,* 576-594. https://doi.org/10.3758/s13428-012-0261-6

Van den Noortgate, W., López-López, J. A., Marín-Martínez, F., & Sánchez-Meca, J. (2014). Meta-analysis of multiple outcomes: A multilevel approach. *Behavior Research Methods, 47,* 1274-1294. https://doi.org/10.3758/s13428-014-0527-2

*Van den Tillaart, J., Eltink, E., Stams, G. J. J. M., Van der Helm, P. H., & Wissink, I. B. (2018). Aggressive incidents in residential youth care. *International journal of offender therapy and*

comparative criminology, *62*(13), 3991-4007. https://doi.org/10.1177/0306624X18758898

Van der Helm, G. H. P. (2011). *First do no harm* (doctoral dissertation). Amsterdam: Vrije Universiteit.

Van der Helm, G. H. P., Beunk, L., Stams, G. J. J. M. & van der Laan, P. H. (2014). The relation between detention length, living group climate, coping and treatment motivation among juvenile delinquents in a youth correctional facility. *The Prison Journal*, 94, 260-275.

Van der Helm, G. H. P., Boekee, I., Stams, G. J. J. M., & Van der Laan, P. H. (2011). Fear is the key: keeping the balance between flexibility and control in a Dutch youth prison. *Journal of Children's Services*, *6*(4), 248–263. https://doi.org/10.1108/17466661111190947

Van der Helm, G. H. P., Kuiper, C. H. Z., & Stams, G. J. J. M. (2018). Group climate and treatment motivation in secure residential and forensic youth care from the perspective of self-determination theory. *Children and Youth Services Review*, *93*, 339-344.

*Van der Helm, G. H. P., Matthys, W., Moonen, X., Giesen, N., Van der Heide, E., & Stams, G. J. J. M. (2013). Measuring inappropriate responses of adolescents to problematic social situations in secure institutional and correctional youth care: A validation study of the TOPS-A. *Journal of Interpersonal Violence*, *28*(8), 1579–1595. https://doi.org/10.1177/0886260512468322

Van der Helm, G. H. P., Stams, G. J. J. M., & Van der Laan, P. H. (2011). Measuring Group Climate in Prison. *The Prison Journal*, *91*(2), 158–176. https://doi.org/10.1177/0032885511403595

Van der Helm, G. H. P., Stams, G. J. J. M., Van der Stel, J. C. , Van Langen, M. M., Van der Laan, P. H. (2012a). Group climate and empathy in a sample of incarcerated boys. *International Journal of Offender Therapy and Comparative Criminology, 56*, 1149 - 1160. https://doi.org/10.1177/0306624X11421649

*Van der Helm, G. H. P., Stams, G. J. J. M., Van Genabeek, M., & Van der Laan, P. H. (2012b). Group climate, personality, and self-reported aggression in incarcerated male youth. *The Journal of Forensic Psychiatry & Psychology*, *23*(1), 23–39. https://doi.org/10.1080/14789949.2011.633615

*Van der Laan, A., & Eichelsheim, V. (2013). Juvenile adaptation to imprisonment: Feelings of safety, autonomy and well-being, and behaviour in prison. *European Journal of Criminology*, *10*(4), 424–443. https://doi.org/10.1177/1477370812473530

Van Gink, R. Vermeiren, N. Goddard, L. van Domburgh, B. van der Stegen, J. Twisk, A., & Popma, L. Jansen (2018). The influence of Non-violent Resistance on work climate, living group climate and aggression in child and adolescent residential care. *Children and Youth Services Review, 94,* 456-465. https://doi.org/10.1016/j.childyouth.2018.08.009

Van Langen, M.A.M., Wissink, I.B., Van Vugt, E.S., Van der Stouwe, T., & Stams, G. J. J. M. (2014). The relation between empathy and offending: A meta-analysis. *Aggression and Violent Behavior, 19*, 179-189. https://doi.org/10.1016/j.avb.2014.02.003

Van Stam, M. A., Van der Schuur, W. A., Tserkezis, S., Van Vugt, E. S., Asscher, J. J., Gibbs, J. C., & Stams, G. J. J. M**.** (2014). The effectiveness of Equip on sociomoral development and recidivism reduction: A meta-analytic study. *Children and youth services review, 38,* 260-275. https://doi.org/10.1016/j.childyouth.2014.01.002

Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2015). Genetic differential susceptibility on trial: Meta-analytic support from randomized controlled experiments. *Development and Psychopathology, 27,* 151–162. https://doi.org/10.1017/s0954579414001369

Vermeulen, K., M., Jansen, D. E., Knorth, E. J., & Buskens, E., & Reijneveld, S. A. (2017). Cost-effectiveness of multisystemic therapy versus usual treatment for young people with antisocial problems. *Criminal Behaviour and Mental Health, 27, 89-102.* https://doi.org/10.1002/cbm

Viechtbauer, W. (2010). Conducting a meta-analysis in R with the metafor package. *Journal of Statistical Software, 36,* 1-48. https://doi.org/10.18637/jss.v036.i03

Viechtbauer, W. (2015). *Meta-analysis package for R*. Retrieved from http://cran.rproject.org/web/packages/metafor/metafor.pdf

White, L., Aalsma, M., Salyers, M., Hershberger, A., Anderson, V., Schwartz, K., … Mcgrew, J. (2019). Behavioral Health Service Utilization Among Detained Adolescents: A Meta-Analysis of Prevalence and Potential Moderators. *Journal of Adolescent Health*, *64*(6), 700–708. https://doi.org/10.1016/j.jadohealth.2019.02.010

Whittaker, J. K., Del Valle, J. F., & Holmes, L. (2015). The current landscape of therapeutic residential care. *Therapeutic Residential Care for Children and Youth: Developing Evidence-Based International Practice.* Philadelphia: Jessica Kingsley Publishers.

Whittaker, J. K., Holmes, L., del Valle, J. F., Ainsworth, F., Andreassen, T., Anglin, J., ... & Courtney, M. (2016). Therapeutic residential care for children and youth: A consensus statement of the international work group on therapeutic residential care. *Residential Treatment for Children & Youth*, *33*(2), 89-106. https://doi.org/10.1080/0886571X.2016.1215755

Wright, K. N. , & Boudouris, J. (1982). An assessment of the Moos Correctional Institutions Environment Scale. *Journal of Research in Crime and Delinquency, 19*(2), 255-276. https://doi.org/10.1177/002242788201900208

Wright, K.N. (1985) 'Developing the prison environment inventory', *Journal of Research in Crime and Delinquency 22*(3): 257-77.

Yoon, I. A., Slade, K., & Fazel, S. (2017). Outcomes of psychological therapies for prisoners with mental health problems: A systematic review and meta-analysis. *Journal of Consulting and Clinical Psychology, 85*(8), 783-802. https://doi.org/10.1037/ccp0000214

CHAPTER 6

General Discussion

Since 2015, the Dutch government has delegated the responsibility for providing residential youth care to the local authorities if placement is voluntary or mandated by civil law. The general aim of this decentralization is to help as many youth and their families as possible in ambulatory treatment or in foster care, while residential care is more and more considered to be a last resort. Alternatives, like small-scale and family-like facilities are developing, which have a place within society, working with greater system-involvement and attention for shared decision making (Ryon, Winokur, Early, & Kosloski, 2017). Residential youth care is becoming a highly specialized facility, providing care for only the most troubled youth with complex problems (Barnert, Perry, & Morris, 2016; Fazel, Doll, & Langstrom, 2008).

In the summer of 2019 a research report on violence in youth care in the Netherlands from 1945 until 2018 was published, which had been commissioned by the Dutch government (Committee Violence In Youth Care, 2019). Conclusions were that violence was present throughout facilities and time. Residential group climate was experienced as hard and even 'today' youth and staff report group climate in secure facilities to be unsafe and repressive. Also, worries have risen about the efficacy of residential care due to an increasing number of suicides in residential care, although risk for suicide is already higher before entering residential care (Duppong-Hurley, Wheaton, Mason, Schnoes, & Epstein, 2014), placement instability, and other discontinuities in residential caregiving (NJI, 2019; Souverein, Van der Helm, & Stams, 2013), violating the first necessary condition for education and treatment, that is, stability and continuity of care (Bronfenbrenner, 1979; Jones, 2008; Schulze, 2000).

Antisocial behavior in residential facilities can be explained by the importation model, which explains antisocial behavior of residents from the perspective of individual characteristics (Kuanling et al., 2008; Gover et al., 2000), and deprivation model, which explains antisocial behavior of residents through environmental characteristics, in particular the deprivation of autonomy through institutional repression (Souverein et al. 2013; Sykes 1958). Furthermore, the relation between residential juvenile antisocial behavior and institutional repression is theorized to be bi-directional, or in other words, they are assumed to mutually influence each other (De Valk, 2019).

The first requirement for residential youth care to be therapeutic is that institutional repression and antisocial behavior of youth be prevented, in particular because of the bi-directional nature of the association between institutional repression and antisocial behavior (De Valk, 2019). This first requirement refers to the basic principle of 'primum non nocere' or 'first do no harm' of medical health care, which also should be the first principle of residential youth care

(Van der Helm, 2011). In other words, 'if it doesn't help it doesn't harm' should be abandoned for 'if it doesn't help it does harm' (Dekovic, 2010). This stresses the importance of this dissertation, which focused on residential group climate, in particular from the perspective that residential youth care facilities should provide a safe environment, without violence, where juvenile antisocial behavior can be prevented, and youth receive the best available care, education and treatment, with the ultimate goal of rehabilitation. Therefore, the aim of this dissertation was to gain more insight in the association between the therapeutic quality of residential group climate and juvenile antisocial behavior.

Main Findings

The first study aimed to examine the relation between residential group climate and aversive reactions to social problem situations designated as aggressiveness-related deficits in social information processing, which are seen as a precursor of antisocial behavior. The sample consisted of 128 adolescent boys and girls. Results showed that a therapeutic group climate was associated with less aversive reactions to social problem situations. It is argued that staff should be trained in providing a therapeutic residential group climate in order to diminish aversive responses to social problem situations in detained youth. Findings reveal opportunities for staff to have a positive impact on youth's development, such that by providing a therapeutic residential group climate aversive reactions to social problem situations can be reduced. This study indicates that improving residential group climate could be a first step in improving social skills of youth in residential youth care, possibly making social skills training more effective.

The second study examined individual and environmental predictors of aggression in a group of youth placed in open, semi-secure and secure residential facilities from the perspective of the importation and deprivation model. A total of 198 youth in residential youth care filled out questionnaires on four dimensions of residential group climate (support from staff, growth possibilities, group atmosphere among youth, and institutional aggression) within a three month interval. Very limited support was found for the effect of residential group climate on aggressive behavior; only institutional repression showed a trend, indicating a positive association with direct aggression. Also, gender composition of the living group yielded a small but significant effect, such that girls placed in same-gender groups showed lower levels of indirect (relational) aggression compared to youth placed in mixed-gender or boys-only groups, even when controlled for gender and initial levels of aggression. Type of facility (i.e., level of security) did not predict differences in

aggression. Individual characteristics of the youth at entry, including age, gender and aggression, were associated with aggression three months later. These findings are in line with prior research showing that aggression is relatively stable across time.

In study three, the differences in perception of residential group climate between open, semi-secure, and secure residential youth care facilities were examined as well as the association between residential group climate and aggression. In total, 159 youth (96 males, 63 females) completed the Prison Group Climate Instrument (PGCI), and (aggressive) incidents were recorded during a period of three months. Perception of residential group climate—including support from staff, growth possibilities, group atmosphere among youth, and institutional aggression —did not differ between the various types of residential care, except for possibilities for growth. Youth in open and semi-secure facilities experienced more possibilities for growth than their peers in secure facilities. A more positive perception of residential group climate in open facilities proved to be related to fewer aggressive incidents at the living group. Also, length of stay was positively associated with aggressive incidents, such that the longer youth stayed in residential youth care, the more aggressive incidents occurred. For semi-secure and secure facilities, no relation between residential group climate and aggression was found.

The last study, a multilevel meta-analysis, was performed on the relation between residential group climate and antisocial behavior, including aggression and criminal recidivism, in youth and adults. The sample contained a total of 23 studies (293 effect sizes). Results showed a significant small-to-medium association between residential group climate and antisocial behavior of r = .179, equivalent to a 20% reduction of antisocial behavior in clients receiving care in a residential facility with a therapeutic group climate. Moderator analyses showed that experienced safety was significantly related to antisocial behavior (medium effect size of r = .288), which amounts to a 33% reduction of antisocial behavior. Given that research shows that client's antisocial behavior is difficult to change, even a small positive influence might be of great value, in particular because of the high personal and societal costs of antisocial behavior. Furthermore, a therapeutic group climate may not only increase the susceptibility to treatment, but may also reduce the detrimental effects of stress and (possible) secondary traumatization that often occur within residential facilities.

Overall, this dissertation shows that a therapeutic residential group climate is associated with lower levels of juvenile antisocial behavior. This finding implies that staff may have opportunities to reduce juvenile antisocial behavior by providing a therapeutic group climate.

Implications of the Findings

The results of the studies in this dissertation have several implications for future research and clinical practice. Foremost, this dissertation provides correlational evidence for the relation between residential group climate and (juvenile) antisocial behavior. Since no causal relation has yet been established, it is important to test the possible causal influence of residential group climate on antisocial behavior through (quasi-) experimental research. Also, the direction of the association between residential group climate and antisocial behavior has not yet been established. Residential group climate may be an antecedent of antisocial behavior, but antisocial or prosocial behavior of residents can also affect residential group climate. Nevertheless, it is plausible to suggest that a therapeutic group climate is a necessary, but not sufficient, condition for successful treatment of youth with antisocial behavior and complex problems.

Residential group climate is only one of the many correlates of antisocial behavior, and there is empirical evidence showing that in order to achieve positive (enduring) effects on antisocial behavior, evidence-based treatment is needed (De Swart et al., 2012; Lipsey, 2009), such as social skills training (Van der Stouwe et al., 2019), cognitive behavioral treatment that is responsive to the individual needs of youth (Hoogsteder et al., 2014; Hoogsteder, Stams, Schippers, & Bonnes, 2018), trauma therapy (e.g., Gutterman et al., 2016; Morina, Koerssen & Pollet, 2016; Rodenburg, Benjamin, De Roos, Meijer, & Stams, 2009) or systemic interventions (e.g., Simons, 2018; Van der Stouwe et al., 2014; Van der Pol et al., 2017).

Notably, evidence-based treatment should be tailored to the specific needs of the client (Andrews & Bonta, 2010), delivered with high treatment integrity (Goense, Assink, Stams, Boendermaker, & Hoeve, 2016), and continuity of care should be assured by placement stability during residential treatment (Holland, Faulkner, Perez-del-Aguila, 2005; Jones, Landsverk, & Roberts, 2007; Munro & Hardy, 2007; Wheatley, Waine, Spence, & Hollin, 2004) as well as by providing aftercare (James, Stams, Asscher, Van der Laan, & De Roo, 2013). A therapeutic residential group climate is considered to be a prerequisite for delivering evidence based treatment targeting antisocial behavior. Future research should therefore not only examine the direct effects of residential group climate by targeting residential group climate as a possible causal factor in the reduction of antisocial behavior, but also as a moderator of treatment effectiveness.

The meta-analysis on residential group climate and antisocial behavior (Chapter 5) shows that research on residential group climate and client's antisocial behavior is accumulating,

showing a small to medium association between residential group climate and antisocial behavior. This is an important finding given that recent research showed that antisocial behavior is rather stable in detained youth (Eltink et al., 2018). Justice-involved youth and (young) adults who show severe antisocial behavior tend to show high (life course) stability in antisocial behavior (Moffitt 1993, 2018; Tremblay, 2004, 2010), which might be difficult to change due to a relatively strong genetic basis (Niv, Tuvblad, Raine, & Baker, 2013), and low genetic susceptibility to positive environmental influences (Van IJzendoorn & Bakermans-Kranenburg, 2015). However, the same genes that increase the risk for antisocial behavior in adverse environments may also decrease the risk for antisocial behavior in positive environments through increased neuro-physiological sensitivity to positive social experiences, including treatment (Iofrida et al., 2014; Palumbo, Mariotte, Iofrida, & Pellegrini, 2018). Therefore, it seems imperative to build and maintain a positive therapeutic group climate, paying attention to safety first. This is a major challenge, because victimization by peers is a common experience in residential youth care (Barter et al., 2004, Freundlich, Avery, & Padgett, 2007; Gibbs and Sinclair, 2000, Khoury-Kassabri and Attar-Schwartz, 2014, Sekol, 2013, Sekol and Farrington, 2009, Sekol and Farrington, 2010). Additionally, Souverein et al. (2017) and De Valk (2019) showed that institutional repression is closely linked to characteristics of residential facilities that pertain to the power imbalance between staff and youth, limitation of contact with important others, reduction of autonomy, and few opportunities to develop competencies, which are the basic requirements of human self-determination and motivation (Ryan & Deci, 2017; Van der Helm et al., 2018).

Safety can be obtained by predictability, stability, fewer changes in staff and peer groups (Euser, Alink, Tharner, Van IJzendoorn, & Bakermans-Kranenburg, 2013). Furthermore, it is essential that staff be trained in trauma-sensitive care (Fischer, Dölitzsch, Schmeck, Fegert, & Schmid, 2016), collaborates intensively with the social environment of the youth, and applies methods of shared decision-making (Ten Brummelaar, Harder, Kalverboer, Post & Knorth, 2018; Langer, & Jensen-Doss, 2018). A structured environment is important (Leipoldt et al., 2019), with clear limit setting and application of risk management tools, while treating each individual child as a person (Van der Helm & Stams, 2017).

Within the current political climate and youth care policy of the Dutch government, residential youth care is seen as a last resort. Beds are sparse; youth placed in residential care have had multiple trajectories of care and treatment with unfavorable outcomes (Wheatley, Waine, Spence, & Hollin, 2004). Within the residential care facilities they are extremely challenged, having to adapt to life without much freedom and autonomy, with limited privacy,

troubled peers and supervision from multiple staff members working in shifts. It can be derived from the dissertation by De Valk (2019) that residential youth care facilities do not always have a therapeutic group climate, and institutional repression may occur if, for instance, there is a disbalance between control and flexibility, staff's expertise and competences are insufficient, possibilities for shared decision making between youth and staff are lacking, if there is no systematic reflection on staff's daily acting and decisions, and the three basic needs for human self-determination (i.e., autonomy, relatedness, and competence; Ryan & Deci, 2017) are violated. Notably, the recent report on violence in youth care shows that repression may even result in institutional violence, in particular in large scale facilities, with unfavorable client-staff ratio's, and insufficiently qualified staff (Coll, Stewart, Coll, Scholl, & Hauser, 2018). However, Hachtel, Vogel and Huber (2019) conclude that mandatory treatment does not have to necessarily result in coercion, and that a caring, authoritative treatment style increases therapeutic alliance, motivation, and positive therapy outcomes. Notably, Moore, McArthur, Death, Tilbury and Roche (2017) found that youth perceived residential care as safe when it was home-like, characterized by caring and supportive staff and peers, but also by clear routines and fair rules (Moore et al., 2017).

Continuity of (residential) care is a necessary condition for any successful effort to establish positive youth outcomes (Hawkins-Rodgers, 2007), in particular because placement breakdowns and transfers can be highly traumatic (Anglin, 2013, Sallnäs, Vinnerljung, & Kyhle Westermark, 2004, Unrau, Seita, & Putney, 2008). Given that residential youth care is considered to be a last resort and costs are high, policies prescribe that youngsters should be admitted for as short as possible time, which is in agreement with international children's rights treaties. It is a devil's bargain, given that a short stay could mean that aims of residential treatment cannot be (fully) achieved. Therefore, residential facilities should focus on creating a therapeutic, and thus safe, group climate. Evidence based treatment could be delivered by external youth care partners, which can continue care throughout the trajectories of youth, reducing discontinuity of care (White et al., 2019).

A significant proportion of youth who are placed in residential youth care under civil law may be better off in family- like, small-scale facilities, also from the viewpoint that these facilities may offer them more protection against harm inflicted by themselves or their parents or family network than (semi-secure) residential facilities (Gutterswijk et al., 2019). Even youth placed under the jurisdiction of penal law, with the aim of protecting society, can sometimes be successfully placed in less secure facilities. For example, measures are taken in reducing or even

rule out separation and physical restraint in residential youth care facilities (NJI, 2019). Since 2016 some youth, who would formerly be placed in a secure youth care facility, are now placed in new small-scale facilities if they meet criteria that protect against criminal recidivism. However, for certain youth, placement in residential youth care will probably still be necessary, such as youth with psychopathic traits (Asscher, Van Vugt, Stams, Deković, Eichelsheim, & Yousfi, 2011), who may be unsuitable for non-residential treatment in the community because they are a danger to themselves and others.

To conclude, residential youth care facilities should invest in creating a therapeutic climate. At the organizational level, management should have a shared vision on the importance of residential group climate, which is associated with better residential treatment outcomes (Chapter 5 of this dissertation; Leipoldt et al. 2019; Robinson et al. 2018). Preconditions of a therapeutic group climate lay in the education, and ongoing training of staff, low staff-turnover and small living groups within the residential care facility (Boendermaker, Van Rooijen, Berg & Barteling, 2013; Leipoldt et al., 2019; Moore et al., 2016). Also, in line with Robinson, Craig and Tonkin (2018), Raine (2013) and the meta-analysis presented in this dissertation, safety should be considered as a first necessity. This, and other dimensions of therapeutic group climate need attention in order to create a solid basis on which individualized, cognitive behavioral therapies targeting criminogenic needs in a responsive way according to the RNR model should be offered next to aftercare (see Andrews, & Bonta, 2010; Hoogsteder et al., 2014, 2018).

Methodological Strengths and Limitations

Several limitations of this dissertation should be mentioned. In the studies conducted in this dissertation residential group climate was measured using youth self-report measures only, not supplemented with observer reported measures or staff reported measures. Aggression was assessed by means of youth self-report with the BDHI-D (Eltink et al., 2018). Notably, self-report of aggression in youth may be biased by socially desirable responding, and thus result in underreporting of antisocial behavior. However, previous research on the BDHI-D showed no underreporting of (direct) aggression in a group of serious juvenile delinquents in the Netherlands (Breuk, Clauser, Stams, Slot, & Doreleijers, 2007). Nevertheless, the BDHI-D has two limitations. The dichotomous ‘true’ or ‘false’ items may have resulted in lack of variance. Also, most items of the BDHI-D assess tendencies to show aggressive behavior, which are rather static (trait-like) instead of actual display of aggressive behavior, potentially limiting possibilities to find significant changes in aggression over time. A second limitation is that limited information was available on

characteristics of the residential facilities and individual client characteristics in the empirical studies of this dissertation and meta-analysis examining the association between residential group climate and antisocial behavior. Also, longitudinal research within residential youth care facilities is hampered by the short time span of most residential placements. For instance, a period of 3 months between the measurements may be too short to find substantial environmental effects on the development of antisocial behavior in residential youth care. However, it should be kept in mind that even a short period of time in a residential institution might be experienced as a major life event for most adolescents, producing change (Van der Helm, 2011). Lastly, only quantitative methods were used, while the use of qualitative methods could be valuable in cross-validating current results.

Despite above mentioned limitations, this dissertation provides useful insights into the therapeutic prospects for residential youth care, showing that openness of residential facilities is positively associated with the therapeutic quality of residential youth care, providing increased opportunities to reduce juvenile antisocial behavior. Despite the strong stability in antisocial behavior, a small to moderate negative association was found between a therapeutic residential group climate and antisocial behavior in a meta-analysis of 23 studies, with the strongest effect for safety. Also, a therapeutic group climate proved to be negatively associated with aggressiveness-related deficits in social information processing in detained adolescents, which is one of the factors that may explain the relation between residential group climate and juvenile antisocial behavior.

Concluding Remarks

Residential youth care is under scrutiny these days due to reports about violence, suicides and placement instability. Alternatives, like small-scale and family-like facilities, are developing, which have a place within society, working with greater system-involvement and attention for shared decision making (Ryon, Winokur Early, & Kosloski, 2017). Residential youth care is becoming a highly specialized type of youth care, providing treatment for the most troubled youth with multiple problems. Residential youth care should go Back to Basic in terms of creating and maintaining a therapeutic group climate, in which both youth and staff feel safe. Only if there is a solid basis, evidence-based treatment and efficient aftercare can be delivered.

Also, research on residential group climate should go Back to Basic by examining the antecedents of residential group climate in more detail, first focusing on the most basic necessary

conditions for a therapeutic group climate, that is, staff to youth ratio, organizational climate, group size, diagnoses of mental disorders in youth, and measuring residential group climate from more angles, not only perception of youth and staff, but also by means of observation, facilitating triangulation. Qualitative research and participatory peer research in the field of residential group climate can provide youth and staff with tools to change their social environment and life circumstances by conducting research themselves and enabling immediate implementation of research results (Dedding, Jurrius, Moonen, & Rutjes, 2013). Finally, future research should examine residential group climate as a moderator of treatment effectiveness, and test the possible causal influence of residential group climate on antisocial behavior through (quasi-) experimental research.

For now, residential facilities should consider safety on the living groups as a priority, by involving youth in a positive process of change through establishing a therapeutic environment, in combination with access to evidence-based treatment (White et al., 2019) that targets the needs of youth from a rehabilitative perspective.

References

Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct*. Routledge.

Anglin, J. (2013). *Pain, normality and the struggle for congruence: Reinterpreting residential care for children and youth.* New York: Routledge.

Asscher, J., Van Vugt, E., Stams, G., Deković, M., Eichelsheim, V., & Yousfi, S. (2011). The relationship between juvenile psychopathic traits, delinquency and (violent) recidivism: A meta-analysis. *Journal of Child Psychology and Psychiatry, 52*(11), 1134–1143. https://doi.org/10.1111/j.1469-7610.2011.02412.x

Barnert, E., Perry, R., & Morris, R. (2016). Juvenile Incarceration and Health. *Academic Pediatrics*, *16*(2), 99–109. https://doi.org/10.1016/j.acap.2015.09.004

Barter, C., Renold, E., Berridge, D., & Cawson, P. (2004). *Peer violence in children's residential care*. New York Palgrave.

Boendermaker, L., Van Rooijen, K., Berg, T., & Bartelink, C. (2013). Residentiële jeugdzorg: wat werkt? (Residential Youth Care: what works?). *Utrecht: Nederlands Jeugdinstituut*.

Breuk, R. D., Clauser, C. A. C., Stams, G. J. J. M., Slot, N. W., & Doreleijers, T. A. H. (2007). The validity of questionnaire self-report of psychopathology and parent–child relationship quality in juvenile delinquents with psychiatric disorders. *Journal of adolescence, 30*, 761-771. https://doi.org/10.1016/j.adolescence.2006.10.003

Bronfenbrenner, U. (1979). *Ecology of human development*. Cambridge, MA: Harvard University Press.

Coll, K., Stewart, R., Coll, K., Scholl, S., & Hauser, N. (2018). The utility of manifest needs questionnaire (MNQ) for better selection and training of youth workers in therapeutic residential care: One agency's exploration. *Children and Youth Services Review*, *94*, 126–131. https://doi.org/10.1016/j.childyouth.2018.09.032

Commissie Geweld in de Jeugdzorg (Committee Violence in Youth Care), 2019. Via https://www.commissiegeweldjeugdzorg.nl/eindrapport/

Dedding, C., Jurrius, K., Moonen, X., Rutjes, L. (2013). *Kinderen en jongeren actief in wetenschappelijk onderzoek: Ethiek, methoden en resultaten van onderzoek met en door jeugd. [Children and youngsters active in scientific research: Ethics, methods and results of research with and by youth*], Houten, the Netherlands: LanooCampus.

Deković, M. (2010). Opmerkelijk. Effecten van interventies: baat het niet, dan schaadt het niet? *Kind en Adolescent, 31*, 2, 98-103.

De Swart, J. J. W., Van den Broek, H., Stams, G. J. J. M., Asscher, J. J., Van der Laan, P. H., Holsbrink-Engels, G. A., & Van der Helm, G. H. P. (2012). The effectiveness of institutional youth care over the past three decades: A meta-analysis. *Children and Youth Services Review, 34,* 1818-1824. https://doi.org/10.1016/j.childyouth.2012.05.015

De Valk, S., Kuiper, C., Van der Helm, G. H. P., Maas, A. J. J. A., & Stams, G. J. J. M. (2016). Repression in residential youth care: A scoping review. *Adolescent Research Review, 1(3)*, 195-216.

De Valk, S. (2019). *Under pressure : repression in residential youth care.* Ridderprint BW, the Netherlands.

Duppong Hurley, K., Wheaton, R., Mason, W., Schnoes, C., & Epstein, M. (2014). Exploring Suicide Risk History Among Youth in Residential Care. Residential Treatment for Children & Youth, 31(4), 316–327. https://doi.org/10.1080/0886571X.2014.958377

Eltink, E. M. A., Ten Hoeve, J., De Jongh, T., Van der Helm, G. H. P., Wissink, I. B., & Stams, G. J. J. M. (2018). Stability and change of adolescents' aggressive behavior in residential youth care, *Child & youth care forum, 47,* 199-217. https://doi.org/10.1007/s10566-017-9425-y

Euser, S., Alink, L., Tharner, A., van IJzendoorn, M., & Bakermans-Kranenburg, M. (2013). The Prevalence of Child Sexual Abuse in Out-of-Home Care: A Comparison Between Abuse in Residential and in Foster Care. *Child Maltreatment*, *18*(4), 221–231. https://doi.org/10.1177/1077559513489848

Fazel, S., Doll, H., & Långström, N. (2008). Mental Disorders Among Adolescents in Juvenile Detention and Correctional Facilities: A Systematic Review and Meta regression Analysis of 25 Surveys. *Journal of the American Academy of Child & Adolescent Psychiatry*, *47*(9), 1010–1019. https://doi.org/10.1097/CHI.ObO13e31817eecf3

Fischer, S., Dölitzsch, C., Schmeck, K., Fegert, J., & Schmid, M. (2016). Interpersonal trauma and associated psychopathology in girls and boys living in residential care. *Children and Youth Services Review*, *67*, 203–211. https://doi.org/10.1016/j.childyouth.2016.06.013

Freundlich, M., Avery, R., & Padgett, D. (2007). Care or scare: The safety of youth in congregate care in New York City. *Child Abuse & Neglect*, *31*(2), 173–186. https://doi.org/10.1016/j.chiabu.2006.09.002

Gibbs, I., & Sinclair, I. (2000). Bullying, sexual harassment and happiness in residential children's homes. *Child Abuse Review*, *9*(4), 247–256. https://doi.org/10.1002/1099-0852(200007/08)9:4<247::AID-CAR619>3.0.CO;2-Q

Goense, P., Assink, M., Stams, G., Boendermaker, L., & Hoeve, M. (2016). Making "what works" work: A meta-analytic study of the effect of treatment integrity on outcomes of evidence-based interventions for juveniles with antisocial behavior. *Aggression and Violent Behavior*, *31*, 106–115. https://doi.org/10.1016/j.avb.2016.08.003

Gover, A. R., Mackenzie, D. L., & Armstrong, G. S. (2000). Importation and deprivation explanations of juveniles' adjustment to correctional facilities. *International Journal of Offender Therapy and Comparative Criminology*, *44*(4), 450-467.

Guttermann, J., Schreiber, F., Matulis, S., Schwartzkopff, L., Deppe, J., & Steil, R. (2016). Psychological treatments for symptoms of Posttraumatic Stress Disorder in children, adolescents, and young adults: a meta-analysis. *Clinical Child and Family Psychology Review, 19*, 77-93. https://doi.org/10.1007/s10567-016-0202-5

Gutterswijk, R.V. , Kuiper, C.H.Z., Lautan, N., Kunst, E.G., Van der Horst, F.C.P., Stams, G.J.J.M., Prinzie, P. (2019, in preparation). The Outcome of Non-residential Youth Care Compared to Residential Youth Care: A Multilevel Meta-analysis.

Hawkins-Rodgers, Y. (2007). Adolescents adjusting to a group home environment: A residential care model of re-organizing attachment behavior and building resiliency. Children and Youth Services Review, 29(9), 1131–1141. https://doi.org/10.1016/j.childyouth.2007.04.007

Hachtel, H., Vogel, T., & Huber, C.G. (2019). Mandated Treatment and Its Impact on Therapeutic Process and Outcome Factors. *Frontiers in Psychiatry*, *10*, 219. https://doi.org/10.3389/fpsyt.2019.00219

Holland, S., Faulkner, A., & Perez-Del-Aguila, R. (2005). Promoting stability and continuity of care for looked after children: a survey and critical review. *Child & Family Social Work*, *10*(1), 29–41. https://doi.org/10.1111/j.1365-2206.2004.00339.x

Hoogsteder, L., Stams, G., Figge, M., Changoe, K., Van Horn, J., Hendriks, J., & Wissink, I. (2014). A meta-analysis of the effectiveness of individually oriented Cognitive Behavioral Treatment (CBT) for severe aggressive behavior in adolescents. *The Journal of Forensic Psychiatry & Psychology*, *26*(1), 1–15. https://doi.org/10.1080/14789949.2014.971851

Hoogsteder, L., Stams, G. J. J. M., Schippers, E. E., & Bonnes, D. (2018). Responsive aggression regulation therapy (Re-ART): An evaluation study in a Dutch juvenile justice institution in terms of recidivism. *International Journal of Offender Therapy and Comparative Criminology, 62,* 4403-4424. https://doi.org/10.1177/0306624X18761267

Iofrida, C., Palumbo, S., & Pellegrini, S. (2014). Molecular genetics and antisocial behavior: where do we stand? *Experimental Biology and Medicine, 239,* 1514–1523. https://doi.org/10.1177/1535370214529508

James, C., Stams, G. J. J. M., Asscher, J. J., De Roo, A. K., & Van der Laan, P. H. (2013). Aftercare programs for reducing recidivism among juvenile and young adult offenders: A meta-analytic review. *Clinical Psychology Review*, 33, 263-274.

Jones, L. (2008). Continuity of care and outcomes in residential care: A comparison of two care giving models, *Residential Treatment for Children & Youth*, 23:3-4, 119-138, https://doi.org/10.1080/08865710609512720

Jones, L., Landsverk, J., & Roberts, A. (2007). A Comparison of Two Caregiving Models in Providing Continuity of Care for Youth in Residential Care. *Child and Youth Care Forum*, *36*(2-3), 99–109. https://doi.org/10.1007/s10566-007-9033-3

Kuanling, Sorensen & Cunningham (2008). 'Juvenile inmates in an adult prison system: Rates of disciplinary misconduct and violence', *Criminal Justice and Behavior, 35*, 1186-1201. https://doi.org/10.1177/0093854808322744

Khoury-Kassabri, M., & Attar-Schwartz, S. (2014). Adolescents' Reports of Physical Violence by Peers in Residential Care Settings: An Ecological Examination. *Journal of Interpersonal Violence*, *29*(4), 659–682. https://doi.org/10.1177/0886260513505208

Langer, D., & Jensen-Doss, A. (2018). Shared Decision-Making in Youth Mental Health Care: Using the Evidence to Plan Treatments Collaboratively. *Journal of Clinical Child & Adolescent Psychology*, *47*(5), 821–831. https://doi.org/10.1080/15374416.2016.1247358

Leipoldt, J., Harder, A., Kayed, N., Grietens, H., & Rimehaug, T. (2019). Determinants and outcomes of social climate in therapeutic residential youth care: A systematic review. *Children and Youth Services Review*, *99*, 429–440. https://doi.org/10.1016/j.childyouth.2019.02.010

Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims and offenders*, *4*(2), 124-147.

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy. *Psychological review*, *100*(4), 674.

Moffitt, T. E. (2018). Male antisocial behaviour in adolescence and beyond. *Nature Human Behaviour*, *2*(3), 177.

Moore, T., Mcarthur, M., Death, J., Tilbury, C., & Roche, S. (2017). Young people's views on safety and preventing abuse and harm in residential care: "It's got to be better than home." *Children and Youth Services Review*, *81*, 212–219. https://doi.org/10.1016/j.childyouth.2017.08.010

Morina, N., Koerssen, R., & Pollet, T. (2016). Interventions for children and adolescents with posttraumatic stress disorder: A meta-analysis of comparative outcome studies. *Clinical Psychology Review*, *47*, 41–54. https://doi.org/10.1016/j.cpr.2016.05.006

Munro, E.R., Hardy, A., (2007). Placement stability — A review of the literature (2007). Available from www.scie-socialcareonline.org.uk/profile.asp?guid=f3360146-4e93-4abf-93ff-25e0637c749d

Niv, S., Tuvblad, C., Raine, A., & Baker, L. A. (2013). Aggression and rule-breaking: Heritability and stability of antisocial behavior problems in childhood and adolescence. *Journal of criminal justice*, *41*(5), 285-291.

Palumbo, S., Mariotti, V., Iofrida, C., & Pellegrini, S. (2018) Genes and aggressive behavior: Epigenetic mechanisms underlying individual susceptibility to aversive environments. *Frontiers in Behavioral Neuroscience, 12*:117. https://doi.org/10.3389/fnbeh.2018.00117

Raine, A. (2013). *The psychopathology of crime: Criminal behavior as a clinical disorder*. Elsevier.

Robinson, J., Craig, L., & Tonkin, M. (2018). Perceptions of Social Climate and Aggressive Behavior in Forensic Services: A Systematic Review. *Trauma, Violence, & Abuse*, *19*(4), 391–405. https://doi.org/10.1177/1524838016663936

Rodenburg, R., Benjamin, A., de Roos, C., Meijer, A., & Stams, G. (2009). Efficacy of EMDR in children: A meta-analysis. *Clinical Psychology Review*, *29*(7), 599–606. https://doi.org/10.1016/j.cpr.2009.06.008

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.

Ryon, S., Winokur Early, K., & Kosloski, A. (2017). Community-based and family-focused alternatives to incarceration: A quasi-experimental evaluation of interventions for delinquent youth. *Journal of Criminal Justice*, *51*, 59–66. https://doi.org/10.1016/j.jcrimjus.2017.06.002

Sallnäs, M., Vinnerljung, B., & Kyhle Westermark, P. (2004). Breakdown of teenage placements in Swedish foster and residential care. *Child & Family Social Work, 9*(2), 141–152.

Sekol, I. (2013). Peer violence in adolescent residential care: A qualitative examination of contextual and peer factors. *Children and Youth Services Review, 35*(12), 1901–1912.

Sekol, I., & Farrington, D. (2009). The Nature and Prevalence of Bullying Among Boys and Girls in Croatian Care Institutions: a Descriptive Aanlysis of Children's Homes and Correctional Homes. *Kriminologija & Socijalna Integracija*, *17*(2), 15–34. Retrieved from http://search.proquest.com/docview/1449375623/

Sekol, I., & Farrington, D. (2010). The overlap between bullying and victimization in adolescent residential care: Are bully/victims a special category? *Children and Youth Services Review*, *32*(12), 1758–1769. https://doi.org/10.1016/j.childyouth.2010.07.020

Schulze, H. J. (2000). *Stability & complexity: perspectives for a child-oriented family policy*. VU University Press.

Simons, I. (2018). *Improving family-centered care in Juvenile Justice Institutions*. Retrieved from http://hdl.handle.net/1887/64998

Souverein, F. A., Van der Helm, G. H. P., & Stams, G. J. J. M. (2013). 'Nothing works' in secure residential youth care? *Children and Youth Services Review, 35*(12), 1941–1945.

Souverein, F.A. (2017). *Tussenrapport: Monitor Verkenning Invulling Vrijheidsbeneming Justitiële Jeugd VIV JJ.* AWRJ, October 1, 2017

Sykes, G. (1958). *The society of captives*. Princeton: Princeton University Press.

Ten Brummelaar, M., Harder, A., Kalverboer, M., Post, W., Knorth, E., & Developmental and behavioural disorders in education and care: assessment and intervention. (n.d.). Participation of youth in decision-making procedures during residential care: A narrative review. *Child and Family Social Work*, *23*(1), 33–44. https://doi.org/10.1111/cfs.12381

Tremblay, R.E. (2010). Developmental origins of disruptive behaviour problems: the 'original sin' hypothesis, epigenetics and their consequences for prevention. *Journal of Child Psychology and Psychiatry 51*, 341–367.

Tremblay, R. E., Nagin, D. S., Séguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., et al. (2004). Physical aggression during early childhood: Trajectories and predictors. *Pediatrics, 114,* e43–e50.

Unrau, Y. A., Seita, J. R., & Putney, K. S. (2008). Former foster youth remember multiple placement moves: A journey of loss and hope. *Children and Youth Services Review, 30*(11), 1256–1266.

Van der Helm, P., Boekee, I., Stams, G., van der Laan, P., & Forensic Child and Youth Care. (2011). Fear is the key: keeping the balance between flexibility and control in a Dutch youth prison. Journal of Children's Services, 6(4), 248–263. https://doi.org/10.1108/17466661111190947

Van der Helm, G. H. P. (2011). *First do no harm: Living group climate in secure juvenile correctional institutions.* (Doctoral dissertation, Free University, Amsterdam, The Netherlands). Retrieved from http://dspace.ubvu.vu.nl/handle/1871/19953?show=full

Van der Helm, G., Kuiper, C., & Stams, G. (2018). Group climate and treatment motivation in secure residential and forensic youth care from the perspective of self-determination theory. *Children and Youth Services Review*, *93*, 339–344. https://doi.org/10.1016/j.childyouth.2018.07.028

Van der Pol, T., Hoeve, M., Noom, M., Stams, G., Doreleijers, T., van Domburgh, L., … APH - Mental Health. (2017). [Review of *Research Review: The effectiveness of multidimensional family therapy in treating adolescents with multiple behavior problems – a meta-analysis*]. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *58*(5), 532–545. https://doi.org/10.1111/jcpp.12685

Van der Stouwe, T., Asscher, J., Stams, G., Deković, M., & Van der Laan, P. (2014). The effectiveness of Multisystemic Therapy (MST): A meta-analysis. *Clinical Psychology Review*, *34*(6), 468–481. https://Doi.org/10.1016/j.cpr.2014.06.006

Van der Stouwe, T., Gubbels, J. , Castenmiller, Y., Van der Zouwen, M., Asscher, J.J., Hoeve, M., Van der Laan, P.H., & Stams, G.J.J.M., (2019, in preparation). The Effectiveness of Social Skills Training (SST) for Juvenile Delinquents: A Meta-Analytical Review.

Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2015). Genetic differential susceptibility on trial: Meta-analytic support from randomized controlled experiments. *Development and Psychopathology*, *27*(01), 151-162.

Wheatley, M., Waine, J., Spence, K., & Hollin, C. (2004). Characteristics of 80 adolescents referred for secure inpatient care. *Clinical Psychology & Psychotherapy*, *11*(2), 83–89. https://doi.org/10.1002/cpp.398

White, L., Aalsma, M., Salyers, M., Hershberger, A., Anderson, V., Schwartz, K., … Mcgrew, J. (2019). Behavioral Health Service Utilization Among Detained Adolescents: A Meta-Analysis of Prevalence and Potential Moderators. *Journal of Adolescent Health*, *64*(6), 700–708. https://Doi.org/10.1016/j.jadohealth.2019.02.010

CHAPTER 7

Summary

Residential youth care is more and more considered to be a last resort. Worries have risen about the efficacy of residential care due to an increasing number of suicides in residential care, placement instability, and other discontinuities in residential caregiving, violating the first necessary condition for education and treatment, that is, stability and continuity of care. Also, violence seems present throughout facilities in residential youth care. Residential youth care facilities should provide a safe environment, without violence, where juvenile antisocial behavior can be prevented, and children and adolescents receive the best available care, education and treatment, with the ultimate goal of rehabilitation. Therefore, the aim of this dissertation was to gain more insight in the association between the therapeutic quality of residential group climate and juvenile antisocial behavior.

The first study aimed to examine the relation between residential group climate and aversive reactions to social problem situations designated as aggressiveness-related deficits in social information processing, which are seen as a precursor of antisocial behavior. The sample consisted of 128 adolescent boys and girls in detention. Results showed that a therapeutic group climate was associated with less aversive reactions to social problem situations. It is argued that group workers should be trained in providing a therapeutic group climate in order to diminish aversive responses to social problem situations in detained adolescents. Findings reveal opportunities for staff to have a positive impact on adolescents' development, such that by providing a positive therapeutic group climate aversive reactions to social problem situations can be reduced. This study indicates that improving residential group climate could be a first step in improving social skills of adolescents in residential youth care, possibly making social skills training more effective.

The second study examined individual and institutional predictors of aggression in a group of youth placed in open, semi-secure and secure residential facilities from the perspective of the importation and deprivation hypotheses. A total of 198 adolescents in residential youth care filled out questionnaires on four dimensions of residential group climate (support from staff, growth possibilities, group atmosphere among inmates, and institutional aggression) within a three month interval. Very limited support was found for the effect of residential group climate on aggressive behavior; only institutional repression showed a trend, indicating a positive association with direct aggression. Also, gender composition of the living group yielded a small but significant effect, such that girls placed in same-gender groups showed lower levels of indirect (relational) aggression compared to adolescents placed in mixed-gender or boys-only groups, even when controlled for gender and initial levels of aggression. Type of facility (i.e., level of security) did not predict

differences in aggression. Individual characteristics of the adolescents at entry, including age, gender and aggression, were associated with aggression three months later. These findings are in line with prior research showing that aggression is relatively stable across time.

In study three, the differences in perception of group climate between open, semi-secure, and secure residential youth care facilities were examined as well as the association between residential group climate and aggression. In total, 159 adolescents (96 males, 63 females) completed the Prison Group Climate Instrument (PGCI), and (aggressive) incidents were recorded during a period of three months. Perception of residential group climate—including support from staff, growth possibilities, group atmosphere among inmates, and institutional aggression —did not differ between the various types of residential care, except for possibilities for growth. Adolescents in open and semi-secure facilities experienced more possibilities for growth than their peers in secure facilities. A more positive perception of group climate in open facilities proved to be related to fewer aggressive incidents at the living group. Also, length of stay was positively associated with aggressive incidents, such that the longer adolescents stayed in residential youth care, the more aggressive incidents occurred. For semi-secure and secure facilities, no relation between residential group climate and aggression was found.

The last study, a multilevel meta-analysis was performed on the relation between residential group climate and antisocial behavior, including aggression and criminal recidivism, in youth and adults. The sample contained a total of 23 studies (293 effect sizes). Results showed a significant small-to-medium association between group climate and antisocial behavior of $r = .179$, equivalent to a 20% reduction of antisocial behavior in clients receiving care in a residential facility with a therapeutic group climate. Moderator analyses showed that experienced safety was significantly related to antisocial behavior (medium effect size of $r = .288$), which amounts to a 33% reduction of antisocial behavior. Given that research shows that clients' antisocial behavior is difficult to change, even a small positive influence might be of great value, in particular because of the high personal and societal costs of antisocial behavior. Furthermore a therapeutic group climate may not only increase the susceptibility to treatment, but may also reduce the detrimental effects of stress and (possible) secondary traumatization that often occur within residential facilities.

This dissertation provides useful insights into the therapeutic prospects for residential youth care, showing that openness of residential facilities is positively associated with the therapeutic quality of residential youth care, providing increased opportunities to reduce juvenile

antisocial behavior. Despite the strong stability in antisocial behavior, a small to moderate negative association was found between a therapeutic residential group climate and antisocial behavior in a meta-analysis of 23 studies, with the strongest effect for safety. Also, a therapeutic group climate proved to be negatively associated with aggressiveness-related deficits in social information processing in detained adolescents, which is one of the factors that may explain the relation between residential group climate and juvenile antisocial behavior.

For now, residential facilities should consider safety on the living groups as a priority, by involving clients in a positive process of change through establishing a therapeutic environment, in combination with access to evidence-based treatment that targets the needs of clients from a rehabilitative perspective.

CHAPTER 8

Appendices

Summary in Dutch (Nederlandse samenvatting)

Residentiële jeugdzorg wordt steeds meer gezien als laatste optie in de jeugdzorg. Er zijn de afgelopen tijd veel zorgen gerezen over de effectiviteit van de residentiële jeugdzorg, onder andere door berichtgeving over een toename van suïcides, vele overplaatsingen en discontinuïteit in trajecten, terwijl stabiliteit van belang is om leren mogelijk te maken. Ook blijkt uit recent onderzoek dat er sprake is van agressie en geweld in instellingen voor residentiële jeugdzorg, waar juist veiligheid zo van belang is voor deze jeugdigen, die al zoveel te maken hebben gehad met onveiligheid. Residentiële jeugdzorginrichtingen zouden moeten zorgen voor een veilige omgeving, zonder geweld, waar het antisociale gedrag van jeugdigen wordt voorkomen en zij de best mogelijke zorg, onderwijs en behandeling krijgen, met als doel succesvolle participatie in de samenleving. De focus van deze dissertatie is om meer inzicht te krijgen in de relaties tussen het therapeutisch klimaat in de residentiële jeugdzorg en antisociaal gedrag van jeugdigen.

De eerste studie onderzocht de relatie tussen het klimaat in residentiële instellingen en negatieve reacties op sociale probleemsituaties, die worden gezien als voorloper van antisociaal gedrag. De steekproef bestond uit 128 jeugdigen, opgenomen in residentiële jeugdzorginstellingen. De resultaten lieten zien dat een therapeutisch klimaat samenhangt met minder negatieve reacties op sociale probleemsituaties. Bediscussieerd wordt dat groepswerkers moeten worden getraind in het creëren van een therapeutisch klimaat om deze negatieve reacties te verminderen. De resultaten laten immers zien dat medewerkers mogelijkheden hebben een positieve invloed te hebben op de ontwikkeling van jeugdigen door het neerzetten van een therapeutisch klimaat, waarmee positieve invloed kan worden uitgeoefend op de negatieve reacties op sociale probleemsituaties. Vanuit deze studie zijn er aanwijzingen dat verbetering van het klimaat een eerste stap zou kunnen zijn in het verbeteren van sociale vaardigheden van jeugdigen in de residentiële jeugdzorg, wat mogelijk ook een positieve invloed zou kunnen hebben op de effectiviteit van sociale vaardigheidstrainingen.

De tweede studie bekeek individuele en instellingsbrede voorspellers van agressie in een groep van 198 jeugdigen in open, besloten en gesloten residentiële jeugdzorginstellingen vanuit het perspectief van de import en deprivatiehypothese. Deze 198 jeugdigen vulden vragenlijsten in over 4 dimensies van het groepsklimaat in de instelling (steun van medewerkers, mogelijkheden voor groei, groepssfeer en repressie) en agressie over een periode van 3 maanden. Er werd weinig ondersteuning gevonden voor effect van het leefklimaat op agressie, alleen repressie liet een trend zien, wijzend op een positieve relatie tussen repressie en agressie. Ook de samenstelling

van de groep in termen van sekse genereerde een klein effect. Meisjes die op groepen met alleen maar meisjes waren geplaatst, lieten minder indirecte agressie zien vergeleken met meisjes en jongens op gemengde groepen of jongensgroepen, ook wanneer gecontroleerd werd voor sekse en het initiële niveau van agressie. Het type instelling was geen voorspeller van agressie. Individuele karakteristieken van de jeugdige bij binnenkomst in de instelling, zoals leeftijd, sekse en niveau van agressie, waren gerelateerd aan agressie drie maanden later. Deze bevindingen laten zien, overeenkomstig eerder onderzoek, dat agressie relatief stabiel is over de tijd.

In de derde studie werden verschillen in perceptie van groepsklimaat tussen open, besloten en gesloten instellingen van jeugdzorg bekeken, evenals de relatie tussen groepsklimaat en agressie. In totaal 159 jeugdigen, 96 jongens en 63 meisjes, vulden de Prison Group Climate Instrument (PGCI), in en (agressieve) incidenten werden verzameld gedurende 3 maanden. Perceptie van het therapeutisch klimaat verschilde niet tussen de verschillende soorten instellingen voor residentiële jeugdzorg, behalve op mogelijkheden voor groei. Adolescenten in open en besloten instellingen ervoeren meer mogelijkheden voor groei dan jeugdigen in gesloten instellingen. Wanneer het leefklimaat als meer therapeutisch werd gezien, werden er minder agressieve incidenten gezien op de open leefgroepen. Ook bleek de duur van het verblijf positief gerelateerd aan agressieve incidenten; hoe langere een jeugdige verblijft in residentiële jeugdzorg hoe meer incidenten er zich voordoen. In besloten en gesloten instellingen werd geen relatie gevonden tussen residentieel groepsklimaat en agressie.

De laatste studie, een multi-level meta-analyse, richtte zich op de relatie tussen residentieel klimaat en antisociaal gedrag, inclusief agressie en recidive, bij jeugdigen en volwassenen. De steekproef bestond uit 23 studies (293 effectgroottes). De resultaten lieten een klein tot middelgroot significant verband zien tussen kwaliteit van het residentieel klimaat en antisociaal gedrag, vergelijkbaar met een 20% vermindering van antisociaal gedrag voor cliënten in instellingen met een goed therapeutisch klimaat. Moderatoranalyses lieten zien dat ervaren veiligheid significant gerelateerd was aan antisociaal gedrag (een middelgroot effect van $r = .288$), dat bijdraagt tot een 33% reductie van antisociaal gedrag. Gezien het feit dat uit onderzoek blijkt dat het moeilijk is antisociaal gedrag van cliënten te beïnvloeden, maakt dat zelf een klein positief effect al zeer waardevol kan zijn, zeker gezien de hoge persoonlijke en maatschappelijke kosten die antisociaal gedrag met zich meebrengt. Een therapeutisch klimaat in de residentiële instellingen zou niet alleen kunnen leiden tot meer ontvankelijkheid voor behandeling, maar zou

ook de nadelige gevolgen van stress en secundaire traumatisering kunnen verminderen in residentiele instellingen.

Dit proefschrift biedt waardevolle inzichten in de therapeutische vooruitzichten voor residentiële jeugdzorg, zoals de aanwijzing dat openheid van de instelling positief gerelateerd is aan het therapeutisch klimaat, en hiermee voorwaardenscheppend is voor het verminderen van antisociaal gedrag van jeugdigen. Ondanks de sterke stabiliteit van antisociaal gedrag, werd een klein tot middelgroot negatief verband gevonden tussen een therapeutisch klimaat en antisociaal gedrag in een meta-analyse van 23 studies, met het sterkste effect voor ervaren veiligheid. Ook bleek een goed therapeutisch klimaat samen te hangen met minder negatieve reacties op sociale probleemsituaties, en daarmee dus minder agressie-gerelateerde tekorten in de sociale informatieverwerking van jeugdigen, hetgeen een van de verklaringen kan zijn voor het verband tussen leefklimaat en antisociaal gedrag.

Op dit moment is het van belang dat residentiële instellingen veiligheid op de leefgroepen als prioriteit zien. Door jeugdigen een therapeutisch klimaat te bieden, in combinatie met evidence-based behandeling, afgestemd op het individu, kunnen zij een positieve verandering doormaken.

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Curriculum Vitae

Ellen Eltink was born on the 9th of February 1981 in Boxtel, the Netherlands. After finishing her secondary education (gymnasium) in Vught she started studying Law at the University of Maastricht, graduating in Criminal Law in 2003. That same year she moved to Amsterdam to study Psychology at the Vrije Universiteit and she started working as a junior researcher at the Expertise Centrum for Forensic Psychiatry and Psychology (EFP). In 2007 she finished her master thesis on motives for suicide attempts, and started working as a pedagogical supervisor of adolescents with developmental disorders. In 2008 she started working as psychologist in a forensic treatment center J.O.C. (Jongerenopvangcentrum; since 2010 Amsterbaken) in Amsterdam, where boys suspected of or convicted for committing crimes were detained. She finished her postdoctoral studies as a mental health psychologist there, and subsequently started her PHD-research. In 2016, Amsterbaken was closed; Ellen worked as project manager in Forensic Foster Care (Spirit Jeugdzorg) and started as Clinical assistant professor at the University of Amsterdam. In January 2017, she started working and further specializing as a Clinical Psychologist (according to art. 14 Wet BIG) at the GGZ-NHN, working with different groups of patients. In 2020 she will be registrated as Clinical Psychologist & psychotherapist

Author's List of Publications

Eltink, E., van Der Helm, P., Wissink, I., & Stams, G. (2015). The Relation between Living Group Climate and Reactions to Social Problem Situations in Detained Adolescents: "I Stabbed Him Because He Looked Mean at Me." *International Journal of Forensic Mental Health*, *14*(2), 101–109. https://doi.org/10.1080/14999013.2015.1033110

Eltink, E. M. A., ten Hoeve, J., de Jongh, T., van der Helm, G. H. P., Wissink, I. B., & Stams, G. J. J. M. (2018). Stability and Change of Adolescents' Aggressive Behavior in Residential Youth Care. *Child & Youth Care Forum, 47*(2), 199-217. https://doi.org/10.1007/s10566-017-9425-y

Van Den Tillaart, J., Eltink, E., Stams, G., Van Der Helm, P., & Wissink, I. (2018). Aggressive Incidents in Residential Youth Care. *International Journal of Offender Therapy and Comparative Criminology, 62*(13), 3991–4007. https://doi.org/10.1177/0306624X18758898

Eltink, E. M. A., Roest, J. J., Van der Helm, G. H. P., Kuiper, C. H. Z. Nijhof, K. S., Vandevelde, S., Wissink I. B., Leipoldt, J. D., Stams, G. J. J. M., Knorth, E.J., & Harder, A. T. (2019). Safety First! Residential Group Climate and Antisocial Behavior: A Multilevel Meta-analysis. *Manuscript submitted for Publication.*

Eltink, E. & Höfte, S. (2020). Forensische Orthopedagogiek: een juridisch kader, in: Hendriks, J., Asscher, J.J, & Stams, G.J.J.M. Leerboek forensische orthopedagogiek (in voorbereiding).

Eltink, E., Souverein, F., Strijbosch, E. & Heynen, E. (2020). Effectiviteit van de Residentiële Jeugdhulp, in: Hendriks, J., Asscher, J.J. & Stams, G.J.J.M. Leerboek forensische orthopedagogiek (in voorbereiding).

Eltink, E., Valenkamp, M. & Wissink, I. (2020). Agressief gedrag bij uithuisgeplaatste jeugdigen, in Harder, A.T., Knorth, E.J. & Kuiper, C.H.Z. Uithuisgeplaatste jeugdigen; sleutels tot succes in behandeling en onderwijs (in voorbereiding).

Souverein, F., Strijbosch, E., Eltink, E. (2020). Geschiedenis van de Residentiële jeugdhulp, in: Hendriks, J., Asscher, J.J. & Stams, G.J.J.M. Leerboek forensische orthopedagogiek (in voorbereiding).

Strijbosch,E., Eltink, E., Souverein, F. & Heynen, E. (2020) Screening van het Leefklimaat in de Residentiële Jeugdzorg, in: Hendriks, J., Asscher, J.J, & Stams, G.J.J.M. Leerboek forensische orthopedagogiek (in voorbereiding).